DOCUMENT RESUME

ED 035 724 08 VT 009 842

AUTHOR	Ward, Darrell L.; Miller, Aaron J.
TITLE	Second National Leadership Development Seminar for State Directors of Vocational Education. Final Report. Leadership Series No. 23.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational and Technical Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-7-0158
PUB DATE	Nov 69
GRANT	OEG-3-7-000158-2037
NOTE	135p.
AVAILABLE FROM	The Center for Vocational and Technical Education, The Ohio State University, 1900 Kenny Road, Columbus, Ohio 43210 ($3.50)

EDRS PRICE	EDRS Price MF-$0.75 HC-$6.85
DESCRIPTORS	Business Administration, *Conference Reports, *Educational Planning, Government Role, Leadership Training, Master Plans, Seminars, Systems Approach, *Vocational Directors, *Vocational Education
IDENTIFIERS	Delphi Technique, Program Evaluation and Review Technique Planning

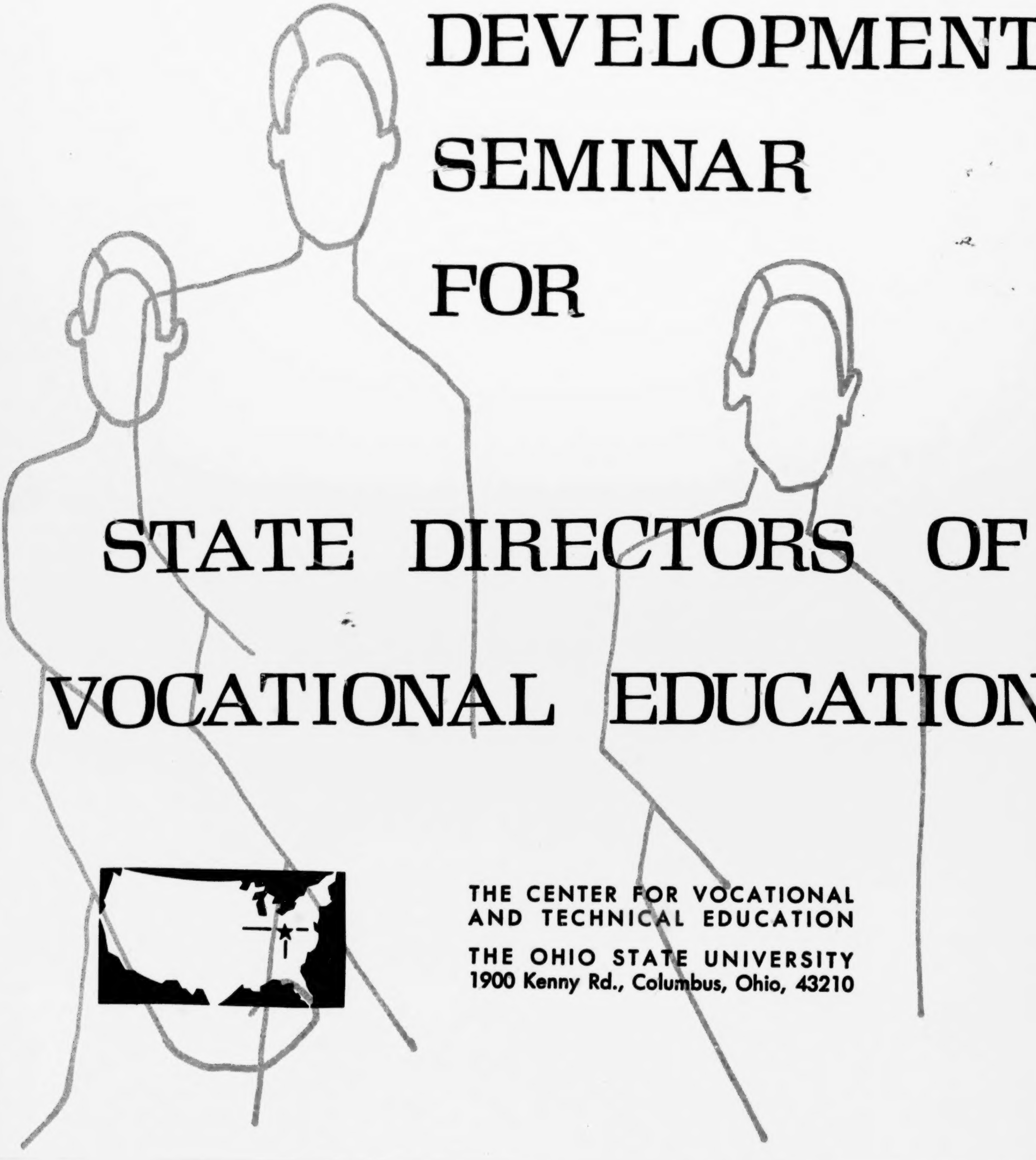
ABSTRACT

More than 100 state directors and other leaders in vocational and technical education attended the seminar designed to provide assistance to state directors in their leadership role in state-wide planning for vocational and technical education. Papers included in the report are: (1) "Long-Range Planning in Government" by DeMarquis D. Wyatt, (2) "Control Data's Interactive Planning System: Long-Range Planning in Business" by Curtis W. Fritze, (3) "A Caul to Vision: Long-Range Planning in Education" by Ewald B. Nyquist, (4) "Manpower Development--Who Will Have the Responsibility" by Lowell A. Burkett, (5) "Planning Within the Power Structure" by John A. Beaumont, (6) "Political Aspects of Planning" by B. Dean Bowles, (7) "Congressional and Legislative Liaison" by Arthur M. Lee, (8) "Project Planning and Control Through PERT" by Desmond L. Cook, (9) "Planning, Programming and Budgeting Systems" by Joseph F. Malinski, and (10) "The Delphi Technique" by Donald P. Anderson. Sub-group work session reports are also included. (JK)

ED035724

LEADERSHIP SERIES NO. 23

SECOND NATIONAL LEADERSHIP DEVELOPMENT SEMINAR FOR STATE DIRECTORS OF VOCATIONAL EDUCATION



THE CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY
1900 Kenny Rd., Columbus, Ohio, 43210

VT 009 842

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U. S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;
2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;
3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;
4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;
5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and inservice education program;
6. To provide a national information retrieval, storage, and dissemination system for vocational and technical education linked with the Educational Resources Information Center located in the U. S. Office of Education.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

LEADERSHIP SERIES NO. 23

ED035724

FINAL REPORT
ON A PROJECT CONDUCTED UNDER
PROJECT NO. 7-0158
GRANT NO. OEG-3-7-000158-2037

SECOND NATIONAL LEADERSHIP DEVELOPMENT SEMINAR FOR STATE DIRECTORS OF VOCATIONAL EDUCATION

DARRELL L. WARD

AARON J. MILLER

The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

NOVEMBER 1969

This publication was prepared pursuant to a grant with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

Office of Education
Bureau of Research

PREFACE

Recent legislative requirements reflect the need for improved state-wide planning in vocational and technical education. Since state directors of vocational education play a crucial role in providing leadership for this essential process, the second annual leadership seminar for state directors focused on the theme "Master Planning for State Programs of Vocational Education."

Recognizing the experience that private industry, other elements of government and general state departments of education have in long-range master planning, experts from these areas made major presentations to the seminar group. A second concern of the seminar participants was translating plans into effective public policy, and outstanding consultants were available to assist in these considerations. Attention was also given to specific systems which are vital to effective planning; notably, Planning-Programming-Budgeting Systems, Program Evaluation and Review Technique, and the Delphi Technique.

It was heartening to witness the intense interest, enthusiastic participation and effective contributions made by the more than 100 state directors and other leaders in vocational and technical education from 43 states, the District of Columbia, and Puerto Rico. Recognition is due Dr. A. J. Miller, coordinator of development and training, and Darrell L. Ward, specialist in state leadership development at The Center, for their efforts in directing the seminar. The assistance of the officers and planning committee of the National Association of State Directors of Vocational Education is gratefully acknowledged.

We trust the papers and summarization of the participant deliberations will be useful in furthering state planning in vocational and technical education.

Robert E. Taylor
Director
The Center for Vocational
and Technical Education

INTRODUCTION

This publication reports the second National Leadership Development Seminar for State Directors of Vocational Education. The annual Seminars are conducted with the primary purpose of providing a mechanism for the inservice leadership development of state directors of vocational education and their staffs.

Specific objectives of the 1969 Seminar included:

1. To provide intensive examination of long-range master planning as it relates to programming in vocational and technical education.
2. To provide a forum for the exchange of information concerning exemplary and innovative programs of the states.
3. To inform the Seminar participants of the latest and most relevant research development and training activities conducted by The Center for Vocational and Technical Education and other appropriate agencies.
4. To contribute to the professional development and self-improvement of state directors and their staff.

The theme of the Seminar focused upon effective long-range planning in vocational technical education. Presentations by outstanding resource people were grouped into three sub-topic areas. They were, "Master Planning in Business, Industry and Education," "Planning within the Political Structure" and "Techniques and Tools in the Planning System Process." Each of the sub-topics was treated in a general session with major presentations by recognized leaders. The presentations were followed by reactions from the Seminar participants and discussion of the topic presented. The format of this report presents the nine speeches linked in this sub-topic relationship.

During the Seminar, participants were divided into five sub-groups for detailed discussion and examination of suggested essential elements in long-range planning. State representatives met together in an effort to identify essential elements in long-range planning and to categorize these elements into a logical development sequence. The summarization of the sub-group reports is not represented as a consensus agreement of all participants. The summary is an attempt to list the elements suggested by the participants to be essential in long-range planning. They are grouped in categories which grew out of the presentations and the discussions which followed. They are listed in a logical order of development as interpreted from the sub-group reports.

The Center is grateful to each of the participants for their active involvement in the Seminar and their many suggestions for future activities. It is hoped that this Seminar can be a beginning point for future activities in the development of long-range planning in vocational education and that this report will provide information valuable to long-range planning efforts.

Darrel L. Ward, Specialist
State Leadership
The Center for Vocational
and Technical Education

Aaron J. Miller, Coordinator
Development and Training
The Center for Vocational
and Technical Education

CONTENTS

PREFACE . . . . *iii*

INTRODUCTION . . . . *v*

SECTION I:
LONG-RANGE PLANNING IN GOVERNMENT, BUSINESS AND EDUCATION

Control Data's Interactive Planning System: Long-Range Planning in Business
Curtis W. Fritze 3
Long-Range Planning in Government
DeMarquis D. Wyatt 13
A Caul To Vision: Long-Range Planning in Education
Ewald B. Nyquist 31

SECTION II:
PLANNING WITHIN THE POLITICAL STRUCTURE

Manpower Development--Who Will Have the Responsibility
Lowell A. Burkett 57
Planning Within the Power Structure
John A. Beaumont 65
Political Aspects of Planning
B. Dean Bowles 69
Congressional and Legislative Liaison
Arthur M. Lee 75

SECTION III:
TOOLS AND TECHNIQUES OF THE PLANNING SYSTEM PROCESS

Project Planning and Control Through PERT
Desmond L. Cook 87
Planning, Programming and Budgeting Systems
Joseph F. Malinski 97
The Delphi Technique
Donald P. Anderson 113

SECTION IV:
COMPILATION OF SUB-GROUP WORK SESSION REPORTS--IDENTIFICATION OF THE ELEMENTS REQUIRED FOR LONG-RANGE PLANNING

Objectives of the Work Sessions 123
Organization of the Sub-Groups 123
Suggested Elements of a State's Long-Range Plan Listed Chronologically in Order of Development 124
Suggestions for Future Action 125

SEMINAR AGENDA 127

SECTION I

Long-Range Planning in

Government

Business

Education

Control Data's Interactive Planning System: Long-Range Planning in Business

CURTIS W. FRITZE

Vice President
Corporate Planning
Control Data Corporation
Minneapolis, Minnesota

One of the most significant characteristics of business today compared with 20 years ago is an accelerated rate of change--industries are growing more rapidly, there is an explosion in information, and a proliferation of products and services of all types. All these things testify to the increased rate of change of everything in our environment.

HOW DOES THIS RELATE TO PLANNING?

The primary means business uses to cope with the rapid rate of change is through the planning function. The planning function has been formally established in most companies and to my knowledge in all large growth companies. In most companies planning is now considered one of the primary functions of management and placed on a par with the marketing function, the engineering function and the manufacturing function.

WHAT IS THE VALUE OF PLANNING?

Control Data credits the planning process, which was established from the birth of the corporation, with its ability to grow and maintain profitability. The value of the planning process is difficult to assess in quantitative terms. However, we do know that companies who do not have a formalized planning process, including many of the companies that we have acquired, are not as successful as those who have formalized this process. We have had the opportunity to interchange information on the planning process with a large number of people in the academic community and with a large number of other manufacturing companies both in our industry and others. Without exception credit is given to the planning process where better than average success has been achieved. For example, one of our acquisitions was experiencing a growth rate on the order of two percent or three percent a year and barely maintaining profitability. In a little more than one year after instituting a formal planning process we were able to turn this activity around to increase the growth rate to on the order of 15 percent per year and increase overall profitability by a greater amount. This was done in the face of an unstable and unfavorable market condition. We have had similar experience in other acquisitions, particularly with those business activities that were established before recognition of planning as a major business function.

HOW DO WE PLAN?

Throughout industry there are many concepts for planning organization, ranging from the autocratic, top down approach, to the interactive, participative approach that is used by Control Data. Like the modes and methods of management each has a place and different systems may be preferable in different organizations or environments. No matter what the system, however, the planning process must have certain common characteristics. The planning process must be a systematic way of defining the objectives or goals, the strategy by which the objectives are going to be achieved and means for planning the specific program of action required for achieving the goals. The process and the resulting plans must also provide means for management to establish and communicate direction, to obtain approval for action intended in the future, and for control and evaluation of action as it is taken.

Plans must represent a commitment to take future action on the part of the individual responsible for implementing the plan and a commitment on the part of management to allocate the required resources. Both the individual developing the plan and his management must understand it and, in fact, look upon it as a contract wherein management agrees to provide the resources and the individual responsible for implementation agrees to achieve the objectives of the plan. While it can be done other ways, the simplest and most logical way to be sure there is agreement and understanding of the commitments in the plan, is to have both parties involved in the development of the plan. This reduces the risk of poor communications as to the intent of the plan and provides motivation to meet the plan objectives. The motivation is further increased when it is clearly understood that the individual's performance will be evaluated on the basis of his ability to meet the plan objectives. In a word, both the planning process and the implementation process should logically be interactive.

CASE HISTORY

In Control Data we believe the planning process must be an interactive process where each organization, and in fact each professional employee of the company, has a responsibility for developing a plan defining the contribution each has made in meeting the overall corporation's objectives. These plans necessarily must be segmented to encompass only the scope of the particular organization or employee and then integrated into a total plan, or a master plan if you like, for the corporation. Interaction in the planning process is achieved by requiring the involvement of management and the individual who is or will ultimately be responsible for implementing the plans. Thus, planning is defined as a primary responsibility common to all professional positions throughout the company, and all employees must participate in the planning function to the degree determined by their position.

Of all of the functions performed at top management level, planning receives the highest priority and a large amount of time is devoted to the planning process. As we go down through our organizational structure less time is spent at each management level until at the lowest supervisory level the primary involvement with planning is the individual work plan and that of planning the day-to-day activities. At top management levels, the time expended in the planning process may occupy as much as 50 percent of our top executives time. What better testimony is there as to the value placed on the planning process by top management.

To achieve maximum value from plans and the planning process plans must be meaningful not only with respect to the content of the plan itself but with respect to the way management uses the plans. In Control Data the planning process and the resulting plans are used as the primary means for providing direction as well as obtaining a management commitment. They define the results a particular individual or organization is expected to achieve. The documented plans are retained and periodically they are used as a means of evaluating the organization and the individual with respect to achievement. They are used as a primary means for determining management advancement and other incentives. The plans are, therefore, extremely meaningful particularly where each individual knows that his performance will be evaluated and his rewards will be determined by the evaluation of his ability to meet commitments made in the planning process.

The planning process is an interactive, decision-making process, where the decisions are the choices of alternatives as required to establish and control the intent for future action. The decisions include the selection or establishment of objectives, the strategy or means for achieving these objectives, and a chronological program or plan for action defining the sequential steps and the time frame in which these steps are taken in order to meet the objectives. In addition the plans contain the necessary information for management control including a means for measuring the progress according to the plan and determining the extent to which the goals are met. Most frequently financial plans and budgets are the easiest and simplest way for quantizing plans and measuring achievement.

Control Data's system of formal plans includes two basic categories of plans. The first of these are plans made by organization on an annual schedule. Each profit and expense center must develop and document the plans for the particular organization for the coming year along with the budgets requested in the annual operating plan. The second category is mission plans that are prepared as required and updated a minimum of once annually until the mission has been completed. The mission plans cut across organization and include all aspects of the particular mission involved. For example, we consider a product line plan as a mission plan. The product line plan must include plans for marketing the product, plans for designing and developing the product, the plans for manufacturing the product and maintaining the product. In addition the plans contain the financial analysis of the overall product line with respect to the total profitability that we expect to obtain.

There are five basic types of plans in the system of plans that are developed and documented or revised and updated at a specific time according to a planning calendar. This system of plans begins with the development of long-range planning inputs. These inputs include both the desires of top management in terms of growth, profitability and major business opportunities and an input from the division organizational level where each operating entity provides an input indicating their recommendations for the coming period in terms of growth, new products, profitability and the allocation of resources required to achieve these desires.

The long-range planning inputs from top management in terms of their desired direction and from the operating entity level in terms of their recommendations are then consolidated or integrated and used as a basis for developing the corporation's objectives and strategy. These inputs are then evaluated by top management to determine that their desires are met as closely as possible and resources are allocated. These allocations are then reviewed by the operating entities to determine that the resources are adequate to meet the objectives and in fact the plan can be accepted as a commitment on the part of these organizations to achieve the established objectives. Several interactions may be required however, when completed, this document then becomes the first formally documented plan for the corporation--the Corporate Objectives and Strategy. Since Control Data is involved in a multiplicity of related businesses in the EDP market, this plan is put together by kind of business in approximately 11 different categories. Objectives are set for each kind of business along with the strategy for achieving them and the allocation of resources. Priorities and growth rates are set and both revenues and profit objectives are included. Emphasis is placed on the coming year, but the plan is developed for a total period of five years. The long-range aspects of the plan are of value in determining the long-range effect of the short-range action which will be taken in the next year's period.

The Corporate Objectives and Strategy are then distributed throughout management as a means of communicating the intent for future action which has been established by top management and which division management believes can be achieved. The Corporate Objectives and Strategy is used as guidance for the development of annual operating plans and budgets. The Corporate Objectives and Strategy are also used as the basis for updating our mission plans including plans for specific products and product lines, plans for marketing by industry, plans for applying our product for various user applications, manpower plans, administrative plans, facility plans, etc.

Once the mission plans have been updated with respect to the objectives and resource allocations required the annual operating plans are developed for the coming year. The annual operating plans provide greater detail and exact plan of action for each organization throughout the corporation based on the overall Corporate Objectives and Strategy and the more detailed mission plans. Detailed operating budgets are a part of the plan and are prepared for each organization. The budgets define financial aspects of achieving the results documented in the plan. They include sales and profit objectives and resource or expense allocations. The annual operating plans are then reviewed and progress measured against them in terms of meeting the objectives and schedules included in the plans, and the budgets that are used for quantizing the plans. It is interesting to note in evaluating our budgets for operating entities sales projections are a part of the budget as well as the cost of sales, expense items, and profit objectives. The financial plans and budgets are reviewed on a monthly basis on the fourth working day of the month by means of a flash reporting system so that we do not need to wait for final book closing in order to perform a reasonable evaluation.

It is recognized that plans sometimes need to change during the period covered in order to adjust to market and business conditions. It is impractical however to allow the plans and budgets continually to change because we lose our reference point for evaluation and control. Instead of changing the base plan deviations from the plans and budgets are approved in accordance with the management by exception principle. In this manner all parties are continually reminded of the change and the need for better planning in the next cycle.

As part of the planning process each employee prepares a "Work Plan" where he and his supervisor sit down together and determine the specific objectives or tasks the individual is to accomplish during the six months period as his contribution toward meeting the objectives of his organizational unit. The work planning process provides the means for direction of effort of the individual. He participates in this planning effort and it is used as a means for evaluating his performance at the end of the planning period.

Planning documents are considered a primary means for communicating direction throughout the corporation. Access to plans and the distribution of planning documents is as broad as is consistent with good management practices, considering the security problem in our competitive environment and the financial community. In general all employees with a need to know or receive copies have access to appropriate plans. Routine distribution of Corporate Objectives and Strategy is made to all division general managers and above, and operating plans are distributed to all department managers throughout the company. Mission plans are distributed on a selective basis according to the need to know about a particular mission. In addition to distributing the annual operating plan in complete form through department manager level, a summary is prepared that is more widely distributed. The summary is distributed down through the supervisory level throughout the company. Wide distribution of the plans and planning documents provides a primary communications vehicle to all individuals in the company receiving them so that they not only know the objectives for their organization but for other organizations in the company as well.

All plans are approved prior to implementation by at least two levels of management above the cognizant management developing the plan. Mission plans are approved for the purpose of incorporating the plans for the specific mission into the next annual operating plan and thus we make the annual operating plan the controlling plan of the system to eliminate the possibility of confusion resulting in our planning process.

All plans are documented so that four basic categories of information are identified in the plan. The format for each category in the plan may differ to the extent required for the purpose of the plan. The four major sections are identified so that the plan can be easily understood and evaluated with respect to plan achievement. These four sections are: 1) the objective or goal; 2) the strategy, or how the objective is to be achieved; 3) the program or plan for action; and 4) the financial plan or budget.

The objective or goal states the desired result from the plan both in qualitative and quantitative terms. The objective must state what is to be done, when it is to be completed, and, frequently, how much cost or effort is involved. The objective must be stated in a manner which will allow management to determine when or if the objective is achieved. This is the basic criteria for determining whether an objective or goal is adequately or properly stated.

The strategy, or how the objective is to be achieved, identifies the particular alternative that has been selected relating to how and what must be accomplished by whom, when, and it assesses the environment in which the objective is achieved. This section frequently includes a situation analysis and a discussion of the alternatives. This section is written in general terms and expressed as broad qualitative and quantitative terms which are detailed in the next step of plan development. The minimum background information required to establish a reference point and to communicate with the various levels of management who must approve the plan and understand its intent is also included.

The program or plan for action, details the sequential steps which represent the specific intent for future action in quantitative terms with check points for control and evaluation. This results in the establishment of priorities, a specific allocation of resources, and includes schedules, budgets, manpower and facility assignments. The program for action also defines the responsibility and interrelationship or interdependence of portions of this particular plan and other plans or programs. It establishes the benchmarks which are evaluated during the coming period covered by the plan so that it can be determined that the plan is on schedule.

The fourth section of the plan is a financial plan. This details the budget requirements for achieving the plan objectives and provides a financial analysis relating to the particular objectives stated in the plan. Overall the financial plan defines the financial results that are expected in terms of the sales or revenues objectives, the resources required or allocated, the cost of the sales or revenues, the expenses to be incurred, and the expected profits. Generally the financial section is in the format of a profit and loss statement. Detailed instructions are issued for preparation of the information associated with a particular plan.

Overall the plans must contain adequate information to document decisions, communicate understanding and provide the check points for evaluation and control. They present information in summarized form making maximum utilization of outlines, graphical and tabular presentations.

REVIEW OF PLANNING SYSTEM

It is quite unlikely that the system of plans used by Control Data is directly applicable to another organization. The concepts and planning process, however, should be applicable to the development of plans in any situation. A review of the major phases in the process in general terms may be helpful. The process starts with an information gathering and evaluation phase. During this phase planning inputs are gathered and consolidated including:

1. Plans for the past period.
2. Performance of the past period.
3. Market and technological forecasts and trends.
4. Top management's desires.
5. Operating management's recommendations.
6. Resource analysis in terms of manpower--technology--money--facilities--and capital goods.

When the planning inputs are assembled, the alternatives for best meeting top management's desires are determined and top management makes the decisions required to select one or more alternatives for meeting these desires. These are documented as the top level plan completing the second planning phase. In Control Data's system this is our Corporate Objectives and Strategy Plan.

In the third phase the major missions are identified and plans developed for each within the overall allocations made in the previous phase. In effect the mission plans are a response to the strategic plan detailing the alternatives and identifying the resources required for achieving the missions required to meet the top level plan requirements. An effort is made to meet the intent of the strategic plan within the broad allocation of resources, however, no attempt is made to completely reconcile the resource requirements.

The fourth phase is the development of the annual operating plan and budget by organization structure. During this phase each organization defines its role for the major missions and incorporates the portions of each mission that they are responsible for into the operating plan for that respective organization. For example, if the mission plan is a product line plan, engineering includes its plans, marketing its plans, manufacturing its plans and so on. When completed the operating plans are integrated and the budgets consolidated. The total resource requirements are then reconciled against the top level Corporate Objectives and

Strategic plan. If the results are adequate, plans are approved. If they are not, top management negotiates the changes required in either the Corporate Objectives and Strategy or in the mission plans until a balanced plan is achieved.

Finally, the Corporate Objectives and Strategy are updated if changes are required and mission plans revised to include the applicable portions of the annual operating plans. When the process is completed a planning matrix of operating plans by organization and mission plans for major programs has been completed, and an overview of both is documented in the top level strategic plan.

In the process of developing and documenting the plans representing the intent for future action and the resources allocated to achieve them we have communicated direction, obtained management commitments, and provided means for control and evaluation.

In summary, we at Control Data believe that planning is one of the primary functions of management in our rapidly changing environment. We credit planning with giving us the ability to grow and to be profitable in our business activities. We believe that the key to our planning system is the interaction obtained through the participation of the individuals involved in implementing the plan. Our corporate development and planning office are primarily means for directing and controlling the planning process so that the plans mesh and when completed the contents are adequate for the purpose.

Our executives do our planning and the ability to plan is a basic attribute to these contemporary executives who run the company.

Biographical data for Curtis W. Fritze:
Bachelor of Science in Electrical Engineering from the University of Minnesota, 1947; Research and Design Engineer, Minnesota Electronics Corporation, 1947-1950; Senior Engineer, Engineering Research Associates, Inc., 1950-1954; Engineering Director of Special Product Engineering, Remington Rand Univac, 1954-1959; Vice President and General Manager, Monarch Electronics Company, 1959-1960; With Control Data Corporation, Minneapolis, Minnesota since 1960; Since 1968, Vice President, Corporate Planning.

Long-Range Planning in Government

DeMARQUIS WYATT

Assistant Administrator
Program Plans and Analysis
National Aeronautics and Space Administration
Washington, D. C.

There exists a remarkable similarity between the way the National Aeronautics and Space Administration goes about its long-range master planning and the way Control Data Corporation conducts theirs as described by Mr. Fritze. I think we can epitomize the spirit of NASA planning by one of the apocryphal Chinese proverbs that says, "If you don't know where you are going, any road will take you there." We like to think that we know where we are going and therefore that just any road won't take us there. We have to plan which road and which forks in the road we are going to follow. Planning is one of many indispensable elements in management.

In Chart I I have put together some key ideas as to where planning fits in the overall management scheme as we see it at NASA. We, coincidentally, use the words that go with PPBS (Program, Planning, and Budgeting Systems) although actually developed our system of Planning, Programming and Budgeting before we knew there was such a formal animal. We did it because we couldn't figure any other way to meet commitments, to make commitments and to get along with the job. Therefore, our system actually predates the PPB System but it has many of the same inherent characteristics.

You are going to find that I will use some words slightly differently than the same words as used by the previous speaker. For example, I will use "the development of strategies" to epitomize long-range planning. By this, I mean the development of the longer term goals that you are trying to accomplish. You must have a purpose in mind other than the mere expenditure of money; the attainment of some end that you wish to accomplish. Long-range planning includes the definition of the goals and objectives which become the strategies within which we operate.

I use the word "strategies" in the military sense of a broad picture of how we are going to go about conquering something.

CHART I

WHERE PLANNING FITS

- LONG-RANGE PLANNING: THE DEVELOPMENT OF STRATEGIES
- PROGRAMMING: THE DEVELOPMENT OF TACTICS
- BUDGETING: THE DEVELOPMENT OF LOGISTICS

Programming, as I see it, is the development of the tactics to implement the strategies. It is the mission planning that takes place after you have defined what you are trying to achieve in which you look at the ways you can go about achieving it by development of mission approaches in terms of programs and projects. Budgeting is simply the development of the support for the tactical plan. This is the translation into the "here and now" of the dollar, the people, and the facilities that it takes to do the program or project. It is different than programming because whereas programming is object oriented, budgeting, by necessity, is expressed in the terms that the Congress prefers to see. So budgeting is simply the translation of a program into administrative terms to enable us to get support and approval from the Executive Branch and the Congress.

Our approach to planning, as I indicated, is very similar to that for the Control Data Corporation. I should note three slightly different emphasis which I think are quite understandable. We have less focus on financial outputs because we are not a profit making organization so naturally we don't center things on the profit making indices. Now this is not to say that we do not look at cost benefit and cost effectiveness ratios in deciding where we want to go and how we want to get there, but we don't end up with a product to be marketed so our focus is more on the goods and the values that we can contribute through the accomplishment of specific tasks. Secondly, in the Federal government we cannot secure a firm contract with our own management, i.e., our own department, for the provision of funds to the completion of the task to the same degree as in private enterprise, although I'm not sure that the degree is markedly different. Our political system is just not set up that way. Our political system runs on annual appropriation basis (at least it does for our agency) which does not permit a contract between the executive department and the agency to guarantee that once you undertake a multi-year project the necessary funds will be provided until it is completed. Instead, there is an annual process to secure the next required funding increment. (I am sure that this is not too different from what exists in private industry because they also have to look to future income sources to back up the management pledges.)

The third point that I would make is related to the second. Since we cannot get a contract soley within the government for a multi-year task accomplishment, our planning therefore has to be aimed at external as well as internal management considerations. By external management I refer to the executive department outside our own agency who must approve it initially, to the Congress who must then approve it and to the public whose attitudes very definitely play a big role in the resolution of the matter. This is not to say that our long-range planning is sales oriented, it means that we, at least NASA, find that we cannot operate under the cloak of planning secrecy which is quite understandable in a competitive commercial environment. We have to step out and tell people where we are going, how we propose to get there, what it is going to cost, what we are going to be looking for as we go along in the way of milestones of accomplishment, where we will reach major decisions, etc. We find this to be to our advantage in the long run because it gives us an opportunity to convey to the external management that we have an idea of where we are going, and that we are not floundering endlessly. I think that this is a very great virtue.

In summary, we do differ from a private company by having less emphasis on financial outputs, by being unable to secure a firm management contract on the results of the planning, and we have to aim deliberately at external as well as internal management. The likenesses of our approaches is greater than our differences, however. We use the planning process for bringing together our internal management so that through interface with one another they better understand one another's problems; thus, our planning process is at the same time both very inwardly directed, as well as outwardly directed.

Noting that long-range planning or master planning is the development of strategies which will have to be implemented by tactical programming and which will have to be sold as budgets for securing the logistic resources, Chart II indicates in a rather simple fashion that these are not independent functions. We develop our long-range ideas, we must translate those into programs and those programs must be translated into budgets. But, in our area of activities (and probably in yours) there are things that change. One thing that has already been alluded to is an uncertainty year by year as to what is the next year's budget going to be. How do we handle that? We are subject to the same process you are. We may be subject to a double jeopardy that you are not. That is, we have to get the money authorized for appropriation before we can get money appropriated for expenditure. So we go through a lengthy process in both the House and the Senate to secure a bill authorizing funds; an action that must legally be completed before there can be an appropriation of funds. In our case this has meant it has been as late as December before we received our appropriations. This year, I predict that it will be November before we will have our appropriations; generally it is about late September or early October. So, we are used to the business of entering into the fiscal year without knowing how much money we are going to get. But, we have to live with that and this is one of the places that planning comes in.

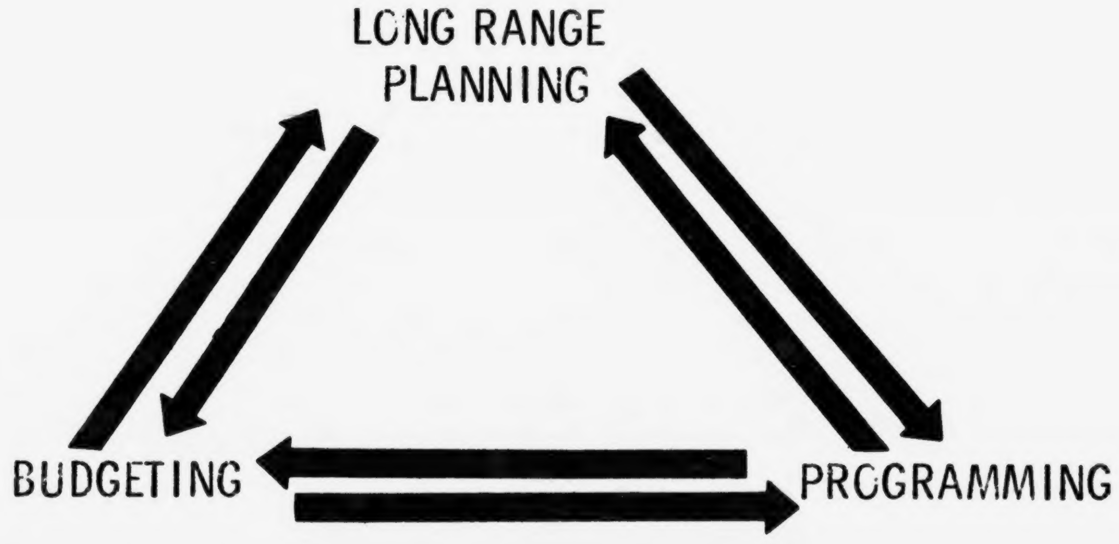
Since the results of the budgeting process will have an influence on achievements, you have to know what you are doing. If you have planned your way completely, then you know where the flexible and inflexible elements are in programming as they relate to your budget proposal on the one hand and your longer term objectives on the other. To accommodate to budget cuts, for example, you may not have to change your long-term goals and objectives; you may simply find that you can reorient or rephase some of your shoter term programming to accommodate the budget changes without upsetting your long-range planning.

Since these things all feed together, certainly the long-term validity of forecasts of the budgeting prospects will influence the reality of long-range planning and multi-year programming. So, these three go together--one cannot have an effective group engaged in long-range planning who are disengaged from concepts of programming and budgeting. It is a part of a total managerial process. The quality of the plan totally, including the local or the short term operating plan, is only going to be as strong as the relationships that are implied in the triangle of Chart II.

Chart III indicates the sorts of things that make up the planning process. This is a process that we have evolved over a period of several years. All steps may not be necessary for every agency or institution but, as expressed by Mr. Fritze, Control Data Corporation at least goes through essentially the same steps. We start with what we call "goals." By goals, we mean the relative enduring long-term values that we are seeking through the conduct of the program. Why are we doing something? We are doing it for some purpose. What is that large purpose? The kinds of programs that we undertake are a little hard to translate to you because they are discipline oriented rather than value oriented in themselves. We have programs for planetary exploration, lunar exploration, astronomy, space physics, space communication, meterology, navigation, etc. In each one of those, we ask ourselves a

CHART II

HOW PLANNING FITS



question--What is it that we are in this business for? Out of that we define a few large goals. "We are trying to understand the universe"--that is a pretty large goal; a pretty abstract goal. In order to avoid getting lost in abstractions, we find it necessary to take another step. In a finite period of time, and the one we pick is about 15 years, where do you think we can be in hard terms? What positions of accomplishment could the country acquire in a given area (that are hard, not abstract) in a specific period of time that is greater than the generation span of current projects? In our case projects run seven or eight years, so you have to look about twice that far to really do a forecast on what you ought to be shooting at in the long run.

We call these "positions of value." We just don't want a list that says "in 15 years we could have photographed every known planet in the solar system." We want to know, suppose we have done that--what will it be worth? We require a statement on the values that we can now discern if the country were to go ahead and attempt to reach a given position.

CHART III

WHAT PLANNING IS

- GOALS
- POSITIONS OF VALUE
- OBJECTIVES
- PROJECTS
- PROGRAMS
- EVALUATION

Let us say that a broad goal is to understand our solar system. That is something that we will probably be working on a hundred years from now, for that is open ended. We ought to be able to define a specific level of accomplishment that we can get to in a finite length of time. It doesn't have to be 15 years. It might be a position you can get to in five years, eight years, 10 years, 15 years (we don't think there is much value in looking beyond 15 years). But, what is the position, and what is the value of the position? What will it mean to the country?

Having defined goals and positions of value, we go into the terminology of what we call "objectives." Objectives are intermediate steps toward the goals. We have two categories--broad objectives which are known to be necessary steps but which cannot be completely defined in magnitude or scope at the present time, and specific objectives that can be clearly and completely delineated. The specific objectives are closed ended. Thus, they provide something that you can circumscribe and say that I will know when I have accomplished them because they are definable. Goals may be so general that you may not really know when you have accomplished them, although you know they define the direction you want to keep moving.

Thus far I have described a process in which we determine goals, we translate those into why is it worth working at all in terms of positions and the values that go with them, and then we break the goals down into smaller objectives that we can kind of encompass in our minds and say, now, we'll specifically try to do these things. Our next step is to develop the means of reaching our objectives by describing projects and programs.

First, a word about alternative plans. We may have alternatives at the goals and objectives level that we evaluate--evaluate and discard. Although it is very difficult to place hard economic values on many of our space objectives, we do attempt to relate our goals and objective possibilities in terms of relative cost-benefit ratios. What is the value of the benefits that arise from achieving these? What is the likely cost to be and is there a corresponding net benefit?

Cost effectiveness comes after you determine that there is a benefit, now what is the cheaper way of getting there? Thus, cost effectiveness becomes important in evaluating alternative implementing possiblities at the project level. That may only be one factor in the whole equation, incidentally, but you look at it and say that I can approach this particular problem two ways: one of them costs a million dollars, one of them costs ten million dollars. If in fact you are going to accomplish the same end, your decision would be to take the less costly approach, obviously.

Cost effectiveness cannot always be measured properly when projects are looked at in isolation. We have to look at how projects fit together in groups because there may be, out of five different projects, some things that make you conclude that if we approach this in a common way and make say, three common developments, we have the mechanism to do all of these projects for less total cost. To do this we look at "program" groupings that arise from putting the projects together to see if there is a more sensible way to accomplish all these projects by adopting certain common principals or ideas.

At the bottom of the list I put "evaluation," although it is not really the tail end of the process. Evaluation is something we do all of the time we are planning. Why have we picked these goals? What are the values? What are the relative values of the positions that the country might attain? What are the relative values of the objectives? What are the relative priorities of the objectives? What are the relative merits of different means--the projects and the program groupings? So, actually the evaluation is a continual thing that goes on in our planning process. It is an interactive business. You don't start at the top and end at the bottom. It is an interactive process in which you keep cycling back and forth.

Chart IV shows how we organize to do this in NASA. It is, I think, strikingly similar to what Mr. Fritze indicated they do at Control Data Corporation. We believe in the participative form of planning. In the first place it is the only one that takes planning out of a sterile atmosphere and puts it into a live atmosphere, and secondly, it is then part of the total management tool of making the managers, our program Associate Administrators, aware of one another, of one another's problems and of one another's needs. Our Administrator meets regularly with what we call a Management Council composed of the Associate Administrators for Manned Space Flight, for Space Science and Applications, for Advanced Research and Technology, and for our Tracking and Data Acquisition programs. They meet together with some staff people.

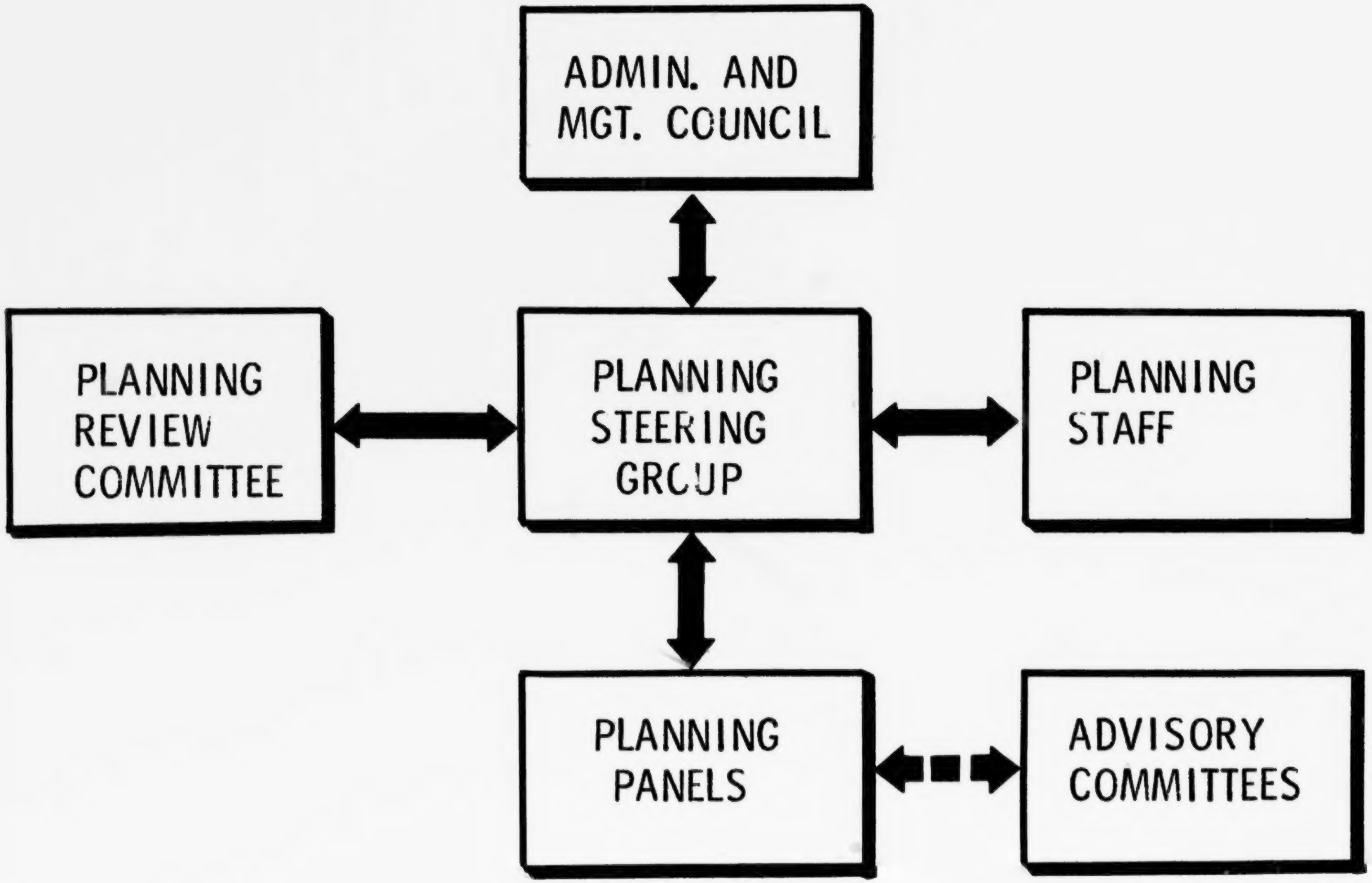
The planning is actually run by a Planning Steering Group (PSG) which is comprised of the deputies of these Program Administrators. This is chaired by the man in our organization who would correspond to a corporate general manager. He is also the chairman of the Management Council. This PSG group is supported by my planning staff. Our job is not to plan--it is to develop and monitor the mechanics and the discipline of planning to make sure that there is appropriate quality to make sure that things are being looked at the way they ought to be looked at. Thus, our job is not to do the planning but to see that the planning is done.

The output of the PSG, including the steps taken in organizing and periodically evaluating results is, in turn, reviewed by a larger committee for the sake of completeness. This Planning Review Committee includes the heads of every one of our research and development centers. They are not part of the steering group--it would get too big--for we have 12 major centers: Houston, Huntsville, the Cape, Cleveland, Langley, etc.--they are all over the country. They sit in and review what the Planning Steering Group has proposed, what direction it is proposing to go, and what decisions it is making as it goes. The PSG reports back to its own bosses--the management council.

The actual planning work is done by what we call Planning Panels. These are each headed by a senior line representative in the particular work area. We have 12 planning panels as I have indicated. These panels are not organized by the way we are functionally organized, but by the way we categorize our activities for planning purposes. We have Lunar Exploration, we have Planetary Exploration, etc. We look at those things in Lunar Exploration which bear more relationship to one another than they do to any other category. That is the way we decide what goes in a category. Everything in a category has more relationship to other things in the category than it does to the other activities. This leaves a lot of grey areas obviously, where you say this could be here or could be there, and you just make a decision--let's treat it here.

CHART IV

HOW PLANNING IS ORGANIZED


ADMIN. AND MGT. COUNCIL
PLANNING REVIEW COMMITTEE
PLANNING STEERING GROUP
PLANNING STAFF
PLANNING PANELS
ADVISORY COMMITTEES

We have 12 of these planning panels--each one is headed by a line official, not a planning official--the top man in astronomy heads the Astronomy planning panel, for example. Then, we insure that on the planning panel are not only the technical representatives from the chairman's area, but representatives from every area of the agency that has any connection with the activities. On the Lunar Exploration panel, Tracking and Data Acquisition is represented because they have got to acquire the data. Advanced Research and Technology is represented because they have to be getting outputs from their work that will aid lunar exploration. Manned Space Flight is also represented because much of it is done by them. Also every research and development center that has any relationship to lunar activity has a representative on this planning panel.

The planning panel may have a representation of 20 to 25 people. This is not full time work for them. It is part time work that goes on year round. Planning is a continuous process. It is not something you can do quickly and then drop and forget about for eight months--rather you do it for about eight months and you can relax for maybe two or three months and then you have to get back in the cycle. Incidentally, external advisory panels report to the planning panels. The President's Scientific Advisory Committee reviews what is going on and the Academy of Sciences has advisory committees in numerous areas such as Astronomy, Space Physics, etc. that work with the appropriate planning panels.

So this is the way we organize to do planning using a participative concept rather than a downward directed concept. It embodies having the planning done by the people who are going to have to do the work. This is sound, because if somebody else plans for him the man who has to do the work will say that that was a very good plan but here is the way you really ought to do it, and so you will have lost the value of the planning effort. Secondly, if you have an independent planning group that says here is what ought to be done and the Administrator and Management Council listen to the operating people and they say, "Well, that was a very good plan--but," then management is not going to buy it either, so here you sit with a plan that is worth about the cost of the paper it is printed on. By a participative approach what you do is use your planning staff to see that the people who are going to do the work do it against the disciplinary requirements that a good professional job ought to have. In other words, you say that you want this covered, we want such, we want to be able to see that, we want to be able to see these relationships, and you work them hard--and out of it you get something.

Now, we have just gone through such a process. You may have seen the headlines on what was ultimately reported to the President yesterday by one of our external management elements, the Space Task Group. Using our input to them I will try to illustrate for you what we do and what we call long-range planning. The first thing we did was to develop goals and objectives for the 12 categories in which we are going to work. The goals and objectives we developed (and which add to about 100 single space pages) do not talk about implementing programs. They just describe achievements that we want to make, the values that are associated with them and how you kind of internally weigh these to arrive at which is the most important, which is the necessary precedent, etc. From that we then went into a development of alternative project implementation plans. From an overview of this, we came up with a concept of what we call an integrated plan--an integrated approach showing that with the development of three or four key new capabilities that we don't now have, we can do all of the desired things to some greater or lesser degree--mostly to a greater degree. And then what we did was to put together overall plans that began to address the resource requirements. Initially, we didn't say how much money can we have? We said what can we give the country? Having decided what we could give the country, we then went through an analysis to show how the level and rate of accomplishment is related to the rate of expenditure. There is a relationship. The more money the country spends earlier, the sooner they can have these things. We illustrated the input-output relationships with four plans.

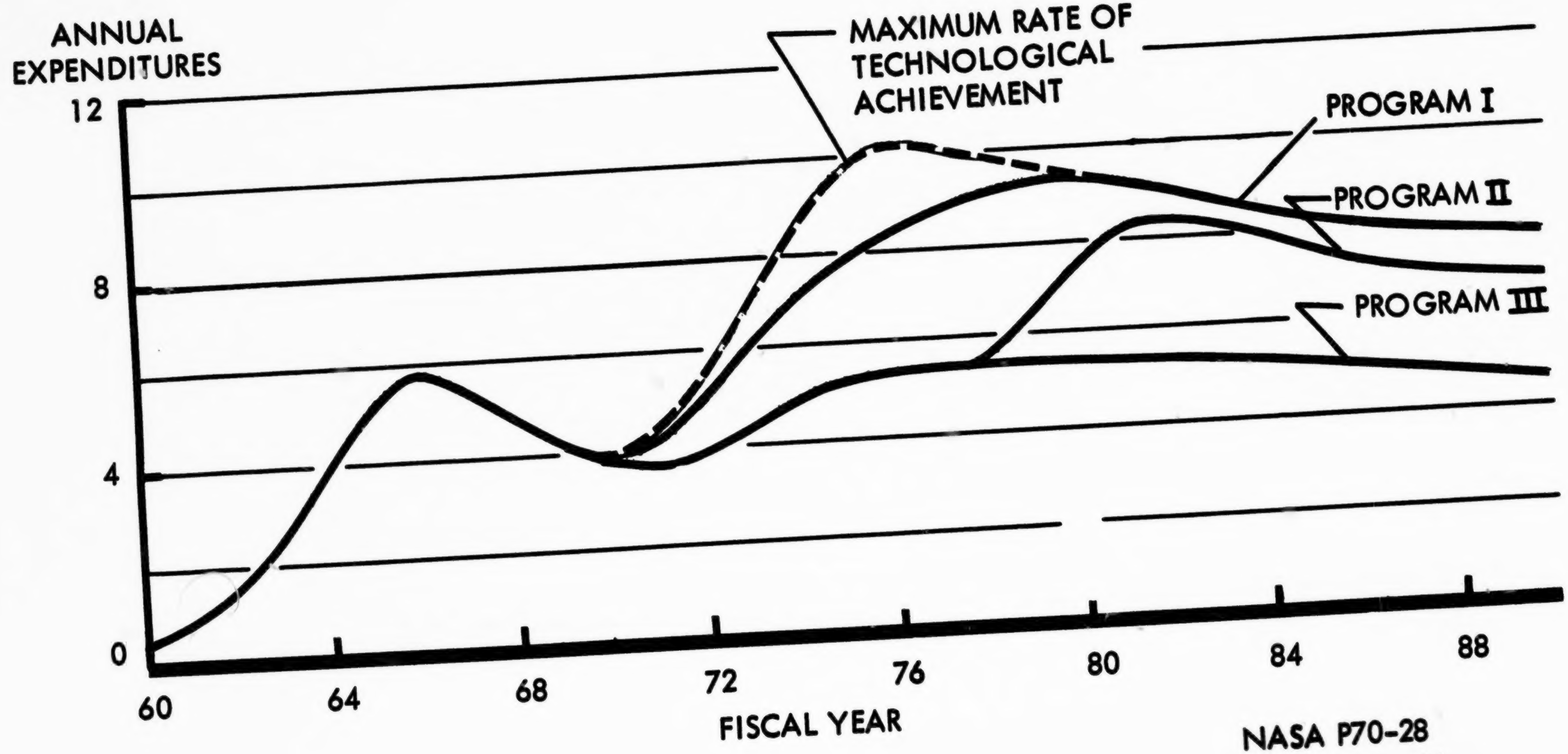
Chart V illustrates the various funding rates that we derived. As an upper limit we priced the rate required to attain maximum technological progress in all program areas, including sending men to Mars in 1981. If you didn't want to move as fast as we believe the technology of the field will support, but rather if you wish to get most of these things by '83 you can move to now what we call Program I. If you wish to move even more slowly and get most of them by '86 you can move down to Program II (The funding hump in Program II is that associated with a specific commitment to go to Mars in 1986). Program III shows a program in which we could build the basic capabilities for manned planetary flight without making a final decision now to go to Mars. This program would provide orderly technological advances that would permit that commitment to be made at some other point in time. So, we developed a number of total programs in which the relationship was a time-output relationship. The more dollars you put in the sooner you will get to the ends.

Chart VI shows the principal program content features that we are talking about and the times at which they could be accomplished for the several program funding rates. You can look at these and say alright, when do you want a multi-man space station in Earth orbit? 1975 is about the earliest technologically feasible date; at the lower funding levels of Program I you could have it in 1976, for Program II it would be 1977. When do you want to put an orbiting space station around the Moon to greatly

CHART V

COMPARISON OF NASA PROGRAMS

(IN BILLIONS OF DOLLARS)



NASA P70-28
Rev. 1 (9-9-69)

CHART VI

COMPARITIVE PROGRAM ACCOMPLISHMENTS

MILESTONES	MAXIMUM RATE	PROGRAM I	II, III
MANNED SYSTEMS			
Space Station (Earth Orbit)	1975	1976	1977
50-Man Space Base (Earth Orbit)	1980	1980	1984
100-Man Space Base (Earth Orbit)	1985	1985	1989
Lunar Orbiting Station	1976	1978	1981
Lunar Surface Base	1978	1980	1983
Initial Mars Expedition	1981	1983	II - 1986 III - Open
Space Transportation System			
Earth-to-Orbit	1975	1976	1977
Nuclear Orbit Transfer Stage	1978	1978	1981
Space Tug	1976	1978	1981
Scientific			
Large Orbiting Observatory	1979	1979	1980
High Energy Astron. Capability	1973	1973	1981
Out-of-Ecliptic Survey	1975	1975	1978
Mars-High Resolution Mapping	1977	1977	1981
Venus-Atmospheric Probes	1976	1976	Mid-80's
Multiple Outer Planet "Tours"	1977-79	1977-79	1977-79
Asteroid Belt Survey	1975	1975	1981
Applications			
Earliest Oper. Earth Resource System	1975	1975	1976
Demonstration of Direct Broadcast	1978	1978	Mid-80's
Demonstration of Navigation/Traffic Control	1974	1974	1976

enhance our capability to explore the moon? Seventy-six is about the earliest Program I would be '78; it would come as late as '81 at Program II funding levels. The main point of this chart is to show that you can phase these things. It is not just a matter of shoving numbers, it is a matter of determing how programs can be phased to match funding constraints.

Chart VII indicates some of the sub-detail for the program funding curves of Chart V, which were envelope curves. This chart shows that you don't have to make one big decision now: We don't do 10 year plans, we do 10 year planning. There is a big difference. We are not trying to say, "Make all your decisions this year and then live in a static world for 10 years." What we identify are the decisions this year that will lead you in a direction that is dynamic, recognizing that the world is going to change. For example the program that is currently under way at a level just under $4 billion will decline gradually if no new flight programs are added as shown by the lower dashed curve. By the mid-seventies you will have no output except laboratory output, as you will have no flight activity. Then we showed that there are a whole host of decisions every year that must be made, year by year to produce the achievements shown on Chart VI.

A ten year plan is actually a succession of annual plans, but we don't pretend to say that we can tell you right now exactly what decisions are going to be made in '75; we can tell you which ones we now see as possible given a certain chain of logic and a chain of circumstances.

We see the major future requirements of the space program to be in new low-cost transportation systems, for example. Chart VII shows one possible phasing for those systems. We would start with the development of a space shuttle. A space shuttle is an airplane to go up into space. You take it up and you bring it back and you turn it around and a week later you take it up and you bring it back and you turn it around like you are running an airline. When we have that, we have a very cheap way to get into space. If you make the decision to start the shuttle development in '71, you can have it in '77. It takes that long to get it and then there will be some final development after you first put it into operation. Along with it we would recommend that development be started on a space station module that you will also have in '77.

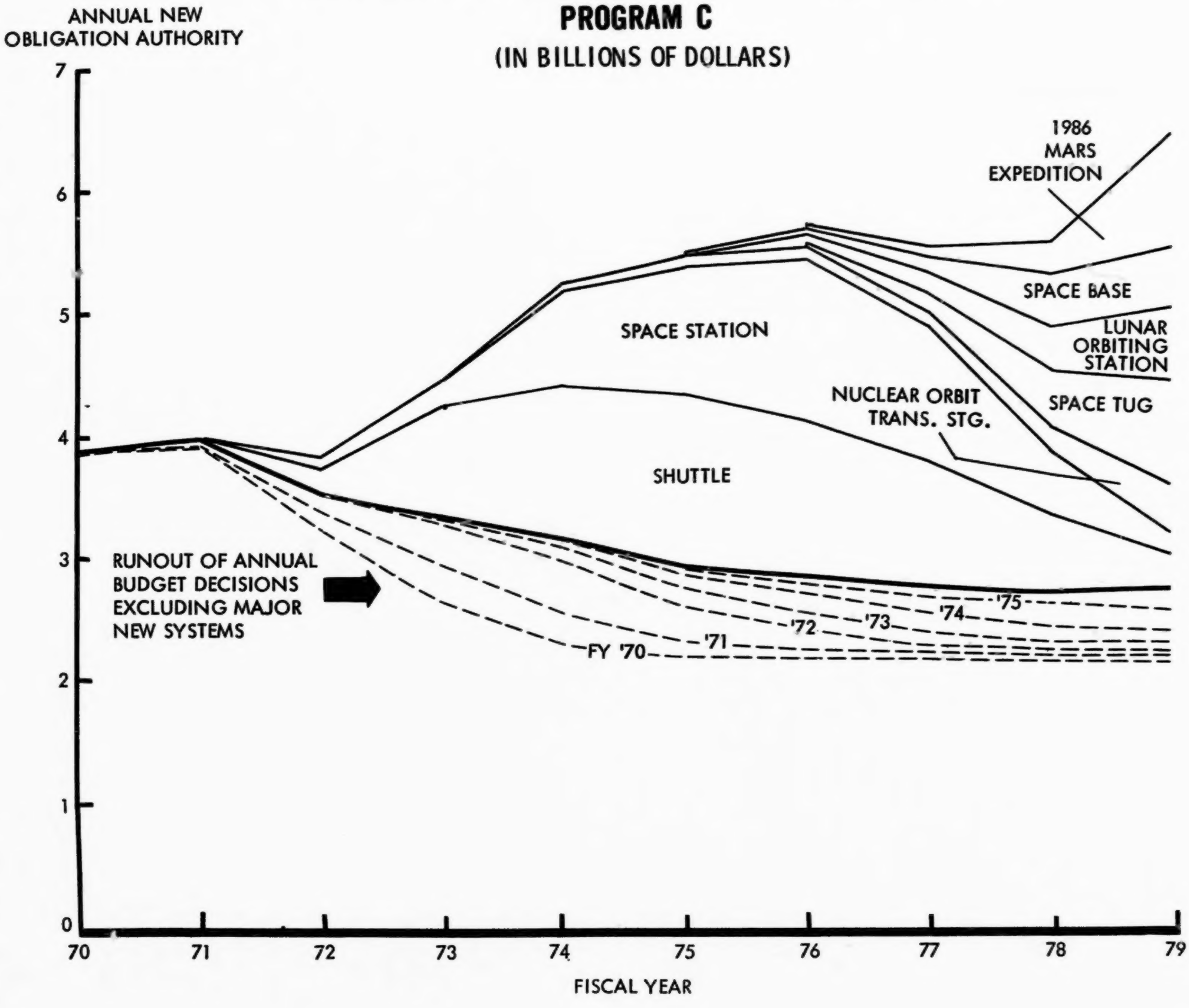
The rest of the space transportation system; that is a nuclear powered stage for major orbit transfer changes, and what we call a space tug or a small chemical stage that we use to move around within orbit should be phased in so that they are ready for complementary operations, as needed.

CHART VII

PHASING OF NEW OBLIGATION AUTHORITY

PROGRAM C

(IN BILLIONS OF DOLLARS)



With these developments in hand we will have the basis for a number of major operations. We can go to a 50 to 100 man space base, we can go to the lunar orbiting space station, we can go to a lunar surface base and we have all but one ingredient for going to Mars.

And so you see we have outlined a succession of decisions, but some of these decisions you can't make before 1976 and there is no point in agonizing today over whether we are going to make them. We say here is the decision you make today, and if later you determine that we don't want to wait until 1986 to go to Mars, we say alright, in a couple of years you can pull some of these decisions forward, providing you are not too far down in time, and you can accelerate this whole program and then you get to one of our higher cases. Or you can go in the other direction. You can say we still have a war in Viet Nam; I don't want to build up the budget that fast. We can say there are certain flexibilities here; we can maneuver this thing around. But, it is always aimed at an end purpose!

We do think we know where we ought to be going. We have been able to state the goals and objectives for the program, to translate those into acquirable poisitions of value, and to define the kinds of projects that will be necessary to their accomplishment. We try to do our planning so that having done it in a major way (and this is the first time we have done this in about five years) we don't expect to completely redefine our objectives again for another three or four years, although there will be modifications. We defined our goals and objectives as relatively enduring, long-term goals. You don't expect those to get upset year by year, even though the implementing projects that furnish the means of accomplishment may be subject to considerable revision as a result of short-term budget considerations. By knowing what we are trying to achieve in the long run, and by knowing alternative approaches in detail, we can be flexible (within limits) in accommodating to such perturbations.

This is what we look upon as a total planning process and the key as I said is looking to the future, at the goals and objectives, looking at how you can get from where you are to where you are going and knowing what these mean in terms of local budgets. So that if anything upsets any one of these (and incidentally, we may learn things as we go out in time that tell us that some of these ideas are wrong or out of date or too modest), you have a basis for being adaptable and flexible.

I think these concepts will apply in the area you are concerned with. You should be able to set a target. You are trying to accomplish something, you ought to be able to define what that something is. You can define how you think you can get there, but then as you go you may find that there is something wrong. You should not get caught in a rut--you should be flexible. You may find that there is another idea that has come in that ought to supersede some previous idea, and you ought to be flexible.

This is the way we look upon this process of planning. Long-range master planning is planning for the future but not trying to make hard, rigid plans for the future. You make plans for the length of time that they are valid and then you do planning so that those plans can be succeeded by another year's plan and you make modifications on them.

Biographical data for DeMarquis Wyatt:
Bachelor of Science in Mechanical Engineering in 1940 from the University of Missouri; Honorary doctorate in Engineering from University of Missouri in 1963; With the General Electric Company and an instructor in mechanical engineering at University of Missouri; With the National Advisory Committee for Aeronautics as a research engineer and associate chief, Propulsion Aeronautics Division, Lewis Flight Propulsion Laboratory 1944 to 1958; Technical Assistant to the Director of Space Flight Development, National Aeronautics and Space Administration, 1958-1960; Assistant Director for Program Planning and Co-ordination of Space Flight Programs 1960-1961; Assistant Administrator for Programming, NASA, Washington, D. C. since 1961.

A Caul to Vision:
Long-Range Planning in Education

EWALD B. NYQUIST

Commissioner of Education
The University of the State of New York
State Education Department
Albany, New York

Some time ago, Aaron Miller tempted me with the prospect of speaking to you this evening. You know what temptation is: It is something a woman runs away from, but which a man crawls away from, slowly, hoping it will overtake him.

I told Mr. Miller that while I was attracted by his offer and almost seduced by his flattery, I was not yet ready for total surrender simply because I would not have time at this season of the academic year. Mr. Miller replied that I reminded him of the rumor that the Italian authorities were going to put a clock on the Leaning Tower of Pisa on the basis that, what's the use of having the inclination if you don't have the time.

Well, I fled temptation and the blandishments of his special pleadings, but unfortunately left a forwarding address. Eventually, I followed Oscar Wilde's famous dictum which historically has never been taught in the public schools but which seems to be gaining new ground in the extracurriculum: The only way to get rid of a temptation is to yield to it. As you can see, I have

---

The following remarks were made at Columbus, Ohio on September 17, 1969, at a National Leadership Development Seminar for State Directors of Vocational Education sponsored by The National Association of State Directors of Vocational Education and The Center for Vocational-Technical Education of The Ohio State University. The seminar's theme was, Master Planning for State Programs of Vocational-Technical Education.

The author deeply appreciates the assistance of Robert S. Seckendorf, Assistant Commissioner for Occupational Education, and Gordon M. Ambach, Assistant Commissioner for Long-Range Planning, in the preparation of these remarks.

The punundrum in the title is explained in the text.

learned to say "no" to any proposal and "yes" to every proposition. It is a business to do pleasure with you.

You can readily see for yourself that an Acting Commissioner of Education has a hopelessly irrelevant mind, goes steadily by the motto that sacred cows make good hamburgers, and ignores the dictum that a closed mouth gathers no feet. Anyway, you should know that I have experienced a severe and prolonged winter of discontent--with a State Legislative session bent on conducting a fiscal fitness program and which left the educational system no longer a money-splendored thing; discontent with a tardy and fumbling Congress and a President who are trying to find a cheaper way of making educational history; discontent with the noise of democracy and the nonstop protests of narrowly vested interest groups that often leave me bloody but unendowed; discontent with the emotional reaction of my vocational education colleagues to some of my best ideas--it ranges all the way from apathy to outright repugnance; and, finally, discontent with the generalized restlessness everywhere, the "yeasty love of confrontation," and the liberated rhetoric of the day, which at least have the happy product of suggesting that the formula for failure is to try to please everybody. And, as the Prime Minister of Israel once said, men and nations do behave wisely once all other alternatives have been exhausted.

Nostalgia, ladies and gentlemen, isn't what it used to be.

This past year, I haven't met a man yet that I didn't dislike, regardless of his race, creed, or color. None of my best friends are people and in short, I feel very much like what the wildcat said in the midst of making love to a skunk: "I've enjoyed as much of this as I can stand."

I feel special kinship, too, with the man who was bitten by a dog. Eventually he was told by the doctor that he had rabies. The patient took out a pad and pen and started writing.

"No need to write your will," said the doctor, "we'll pull you through."

"It's not my will," said the man. "It's a list of people I'm going to bite."

And my present condition reminds me, too, of the story of the tired Detroit executive who dragged himself home from the office after the roughest day imaginable. As he wearily opened the door, his small daughter screamed: "Daddy, Daddy! You've got to help me with my arithmetic." He held her off until he'd hung up his coat, then asked for the problem. "How do you take one-eighth from one-fifth?" she asked.

"Honey," he sighed, "I was just about to do it."

As you can see, no matter how hard I try to be an educator cheerfulness keeps creeping in.

Well, I am delighted to see so many of you at this vocational educators love-in.

It is my pleasure to be with you this evening to discuss the most important function in any sector of social endeavor, and especially in education, for if the educator's job is to remove ignorance, then he had better be in a position to foretell the future in a day of rapid change.

All of which reminds me of two final brief stories.

A. J. G. Priest, in his delightful volume, *Old Hilarity*, tells of the story of a Frank Smith, a railroad executive, who came to his desk one morning in the 1890's to be told that a daughter, just born to one of his associates, had arrived with a thin, diaphanous membrane, part of the amniotic sac, known as a caul, over her eyes, and that a child so born had the gifts of prescience, of prevision, of foresight. It was once thought to be a good omen in those mystical days.

Frank Smith replied at once that he was sure that he had come equipped with a caul over his rump, because his hindsight was so much better than his foresight.

I'm afraid too many administrators in state education departments were born with cauls in the wrong places. As vocational educators, are we not having a bad case of hindsight, especially in view of the Nixon Administration's proposed comprehensive Manpower Training Act of 1969 which frankly scares the hell out of me with its threat of establishing a dual system of education in this country.

And then one last story about Ma and Pa sitting in their living room one cold winter night rocking away in their rocking chairs.

This is a pretty sexy story, so brace yourselves.

Ma, in a nostalgic mood, said to Pa: "Do you remember when you used to hold my hand?"

And he got creakily out of his chair and walked across the room and held her hand.

She said, "Pa, do you remember when you used to kiss me on the cheek?"

He bent down and kissed her on the cheek.

And she said, "Pa, do you remember when once in a while, once in a great while, you used to bite me on the neck?"

Whereupon he turned around and headed for the bathroom door.

Ma exclaimed, "For heaven's sake, where are you going, Pa?"

"I got to go and get my teeth."

My point being, if he had been a planner he would have had his teeth in already.

I am expected to talk about Long-range Planning in Education. On another occasion on this subject, I entitled my remarks: The Future Belongs to Those Who Prepare For It, or, as an alternate, Learning How to Live Under Water. I shall explain both of these in my remaining discussion.

In the not inconsiderable time I allot for professional reading, much of it is engrossed by reading articles, documents, monographs, and even tomes about planning in education, and especially as it is a new function of state education departments. There has been a lot of loose talk by a host of experts, in and out of education, about state education departments, their historic preoccupation with regulatory duties and custodial functions, and lack of planning capability. Well--they're right.

We can thank the availability of Federal funds and the rising expectations of the people who have decided that education is the instrument by which society is going to remake itself, for forcing state education departments to engage in planning for the future.

Just the same, if all the expert people who write and speak on the subject were laid end to end, it would serve them right. The subject of planning is becoming intellectualized and abstracted--this is the easy part in my view. The harder part is what comes first--establishing goals and objectives--and what comes last--giving goals and plans practical effect. But this is not the time to chew the cud of bicker and reproof.

The climate and characteristics of the society in which we find ourselves has established, more than anything else, the need for long-range planning in the business of education.

We are in an age where education has become big business, where costs have increased rapidly, where new programs no longer go through a period of cultivation but are thrust upon us in uncoordinated order, when there is great unrest among students, increasing militancy of teachers, and a streak of conservatism on the part of taxpayers. There is a crisis of confidence in the public schools. A shadow seems to have fallen across the academic community. Public winds are blowing in our faces.

PART I. INTRODUCTION AND BASIC ASSUMPTIONS

It will be the basic premise of this paper that if State Education Departments and their governing boards are to count as seminal leadership forces in shaping education in the last third of the twentieth century, they had better soon become constructively abrasive agents of deliberately contrived change and talented engineers of consent for reform. This requires long-range planning for change and innovation, and you have to know that I define innovation as a planned disruptive experience that makes a productive difference.

In a day characterized by a breathlessness in pace of change and a national faith in flux, when only the stable and unchanging are unreal and tradition has been defined as something you did last year and would like to do again, a premium is placed on organizational adaptability and versatility. Highly rigid and inflexible organizations can only react to change; leadership agencies, able to extrapolate from the present to the future and unafraid to peek around the corner to see what is possible--they dominate change, feel comfortable with it, and thereby shape it and master it. It is an impossible thing to plan for an ultimate utopian solution. (The Greek word for "utopia" literally means "nowhere.") It is quite another to dream about the future and to have the ability to make some part of it come true in your own time. Planning in education, in particular, because of the rapid change in knowledge and its largely intangible product, is complex, difficult, and full of ambiguities. I often feel like Pogo: We may be faced with insurmountable opportunities. Yet, in spite of difficulties, planning decisions have been and will continue to be made, and as a recent author has said, the realistic goal is progress towards improving these decisions and not a final solution.

Let me first give you three overarching goals of a state education department:

It is the responsibility of any State to ensure:

1. That the young people of the State are provided with opportunities for the highest possible quality and diversity of education;

2. That these opportunities are made equally available to every individual wherever he may live in the State and without regard to creed, color, handicap, or economic circumstance;

3. And that the resources of the State allocated to the attainment of these goals are used with the utmost efficiency and economy.

These goal-mandates are not new in origin. None of them has been perfected in any State. In any case, the times call for new ways in which to achieve them.

These fundamental responsibilities furnish the basic tripartite charge to any adequate system of State governance and administration of education and provide it with the scope of its authority for action and policy development. Any State having mores or organizational, legal or employment arrangements which attenuate the ability of a State board and its administrative arm to discharge these responsibilities fully, will have to recognize that these self-imposed handicaps probably also limit the quality, quantity, and efficiency of its educational system.

In short, it is an assumption in this paper that there is a good correlation between the development of a State's educational system and its general level of quality, on the one hand, and the leadership strength of its overarching superintendence focused on the State board and State education department, on the other.

PART II. FORCES SHAPING STATE EDUCATIONAL LEADERSHIP AND DECISION-MAKING POWER

I should like to mention just briefly a few factors and trends now shaping state educational leadership and forcing what I call a redistribution of decision-making power in education away from its traditional sources, rising vertically toward higher levels of government and flowing laterally to other groups, namely, new innovative structures, lay consumers, civil agencies, and professional and non-professional employees. These provide some rationale for long-range planning.

1. Interlocking complexity or the growing interdependence with education of an increasing number of pluralistic publics. The community of education is expanding. The new era is one of "going steady."

2. The growing militancy of teachers (if you want a piece of the action, come to New York).

3. Racial integration, the Civil Rights Movement, and Black Power (Satchel Paige, one of my favorite humorists, once remarked, "Don't never look back--something may be gaining on you.") The poor and those who have been handicapped by prejudice and poverty want a seat at the table. It is a day of involvement. There is a disparity between

our constitutional rhetoric about equality and noble ideals and observable human behavior and events.

4. Creative Federalism or the concept of a partnership of shared responsibility for education involving the triad of the local school system, the State, and the Federal government (some call Life with Uncle "cremative Federalism").
5. Increasing demands from the public and from political authorities at all levels, upon educators to provide better and more objective accountability for their educational problems.
6. Urban education and the plight of our large cities with their intense educational problems.
7. The new initiatives for innovation emanating from outside the usual educational establishment (e.g., 1) the social-industrial complexes like RCA, Xerox, and others which have merged their technical interests with various types of producers of educational materials and techniques; and 2) the new regional educational laboratories).
8. The increasing influence of the courts in resolving educational issues.
9. The new student activism and idiom of unrest. It is no longer necessary to encourage young people to set the world on fire. It used to be that when a student went to the principal's office, the student was in trouble. The average age in the United States will soon be 25. It has been said that a culturally distinct and apparently permanent youth class is emerging. It is a time of academic discontent and desanctification of cherished institutions and beliefs. I think these things have great implications for educational change, especially with respect to the involvement of the young in educational decision-making, particularly about the curriculum.

These trends have serious consequences for state education departments, for both their intellectual style and the functions they must perform, especially planning.

PART III. THE IMPORTANCE OF SELF RENEWAL

Deriving from the basic premise stated earlier is the strong corollary that state education departments must play a central role in master planning for education. I will deal with the rationale for this position, discuss some general principles with respect to overall planning, identify some organizational patterns, and place within the total planning system, the field of vocational education.

I will not overlook, however, the singular opportunity to comment about the State Plan activity with which so many of you have been busy these past few months.

It is a visceral claim with me, a gut assumption, or more euphemistically, a deep-seated conviction, that a strong state education department can be a powerful institutional agent of change, either by creating the requisite conditions for change or by directly effecting change.

One of the fashionable major strategies for effecting change is the development of structures for the purpose. This has come about because we have realized that in a world of continuous change, change, if it is to be controlled, must be institutionalized: that is, there must be in each major system today a segment that takes thought for tomorrow, that sees to it that needs are anticipated and prepared for. The development of a competent state education department is, itself, a major example of a state strategy for effecting change. A competent state education department's ministrations may well be instrumental in the social process which Daniel P. Moynihan has called the "professionalization of reform."

How can a state education department be an agent of change and serve to regularize and legitimize educational reform?

Every state education department should first develop a plan for self-renewal, as the popular phrase goes, a plan which, if carried out, will be instrumental in developing an internal organization and operating procedures designed to meet the needs of the changing society and the emerging educational program.

I will not go into detail here on how such plans can be carried out, but this is a first essential in engaging in long-range planning.

PART IV. ESTABLISHMENT OF GOALS AND OBJECTIVES

Any system of long-range planning must be preceded by a fundamental activity, the establishment of educational goals and objectives.

Seneca once stated that if we do not know to which port we are sailing, no wind is favorable. Comparatively few state education departments have gone through the process of defining broad goals to which state government, the local schools, and citizens can commit themselves in allocating the combined local state-Federal resources available for their accomplishment. It is a painful process and one which, if it is to be well done, involves wide participation of internal staff and consensus in the public arena as well as the educational community.

Broad goals are: Providing an adequate supply of well-qualified teachers; providing, in each school of the state, curriculum materials, activities, and procedures that contribute most directly to developing an individual's ability to think, to live with ambiguity, to be adaptable; construction of enough new classrooms to keep pace with increasing enrollment; the encouragement of innovation to achieve more efficient use of materials, facilities, and personnel; reorganizing local districts into units that are administratively and educationally strong and financially efficient; providing adequate opportunities for continuing education for adults in all phases of their lives: work, family, public, and cultural life; etc. These are broad program goals and should be stated in measurable operational terms not in glittering generalities.

Such a goal statement should recognize the proper role of local direction and control of individual elements of the educational system and the overriding responsibility of the state to ensure quality performance by those individual elements.

Requiring even more effort is the process of defining specific educational objectives to be achieved in the teaching and learning process. A recent book on the preparation of instructional objectives begins with an echo from Charles Dudley Warner's famous remark about the weather: "Everybody talks about defining educational objectives, but almost nobody does anything about it."

Henry S. Dyer of the Educational Testing Service has recently given us the reasons why the goals formulated in the past have been largely non-functional: To much reliance on the magic of words; too little public participation in formulating the goals; and too great readiness to suppose that the goals are already given and require only to be achieved.

What are the desirable outcomes of the educational process, not only in terms of basic skills, but including behavioral outputs as well? Each state must develop its own taxonomy of both cognitive and non-cognitive objectives and they must be stated as far as possible in measurable terms, including expected behavioral outputs.

Evaluation procedures cannot be exemplary nor can long-range planning be fully effective without the definition of broad goals and specific educational objectives.

PART V. LONG-RANGE PLANNING

This brings me to the rationale for long-range planning. It is paradoxical that simultaneously as we bear witness to the widespread exponential rate of change, there is growing insistence on long-range planning. The explanation is simple. Many rates of change are predictable. Projections can be made. On the other hand, it is a wise state education department that scrutinizes at least yearly, and preferably continuously, every aspect of its long-range plan to ensure that it accommodates the unexpected and expands as one moves into it. Simple and stable straight-line relationships in education no longer exist. Education is a complex mix of many shifting and interacting components.

Planning in some state education departments is now a year-round focused affair, not only to budget for the succeeding year's needs but to make adjustments in long-range plans for unforeseen changes and needs.

In these departments, planning is viewed with the affectionate disrespect you would normally show to things you care about deeply--say a wife or an old guitar. These departments know, too, that the Chinese use the same idiograph for trouble and opportunity--it is incidentally, two women under one roof.

In other departments, I am afraid, planning is viewed, if at all, as disagreeably good for people--say something like an enema. Such agencies let trouble become crisis (which literally means moment for decision) and find themselves unready with examined and sound solutions.

While it would be highly commendable if all operating heads in a department could be competent to plan in accordance with the new requirements (or could find time for it, even if competent), it is essential for some major officer to be designated as planning officer with the function of coordinating and stimulating the planning of an entire department. Some state education departments have established an Office of Long-Range Planning and Program Development for the purpose.

There is a growing practice for state governments to engage in PPBS, Planning-Programming-Budgeting System, following the prominent example of the Department of Defense, and McNamara who demonstrated that he could get a bigger bang for a buck. State education departments reluctant to launch a planning-programming-budgeting system will undoubtedly find soon enough that the initiation of program budgeting procedures by the U. S. Bureau of the Budget will be certain to be reflected in future Federal criteria governing state and local applications for Federal assistance in many program areas. The system of planning required under the Vocational Education Amendments of 1968 is a prime example of this direction. States would do well to work closely with federal officials in order to ensure that state and federal programming systems are complementary and mutually supporting.

PPBS involves detailed planning for every area of a department's responsibilities; planning in written form so that it can be discussed and reviewed by all concerned; planning in time perspective so that the future can be projected step by step; and planning in such form as to make visible the accomplishments of the department in relation to its expenditure of resources.

A recent writer on the subject states that a good planning system enables one to ask such questions as:

What does this program attempt to do?

What does it do it with and with what results?

How much does it really cost? This year? Over five years? Over ten years?

What could it do with fewer resources? With more resources?

What other function might it take on or give up?

Should it be continued and at what level of support?

A planning-programming-budgeting system is designed to give a department head the information he needs for decision-making. It forces the periodic identification and assessment of needs and opportunities for educational programs, materials, and methods in a state, definition of the human and physical resources necessary to carry them out, the designation of a hierarchy of concerns and a priority of interests (the relative urgency of various problems and issues), and the consequent allocation of resources to solve them.

No one should underestimate the difficulties and rigorous discipline required in developing a PPBS System for education. But it is indicative of the increased accountability being asked of educators for stewardship of an important growth industry that they are increasingly subjecting themselves to the process (or are being compelled to do so).

There are also many other emerging techniques which can be applied in education and which not only supply information and data needed to make decisions but also analyses of the relationships of variables having a bearing on the outcomes of the decision-making process.

There is new emphasis at the Federal level on comprehensive statewide planning. State education departments, now notably deficient in planning function or skill, yet, paradoxically, the most logical agencies to serve as technical planning areas for education in their respective states, have an unexcelled opportunity right now to assume the most important function they can perform.

Planning embraces a series of processes ranging from the determination of educational needs to legislative and administrative action:

- organizing and staffing for planning
- developing a planning strategy
- assessing educational needs through statewide or intensive study
- evaluating educational performance and output
- setting goals, objectives, and targets for planning
- formulating alternative ways to achieve objectives
- reducing alternatives to best methods possible within limitations and projected future resources
- translating plans into action programs
- recycling the planning process in the light of experience

The characteristics of a competent planning mechanism have been described. To be effective, it should have these capacities:

- to provide inputs from all relevant constituent elements within the state
- to assimilate these inputs into an integral whole, and to specify goals, priorities, and objectives of the planning
- to translate these into alternative courses of action, based upon technical study and evaluation
- to feedback alternatives to constituent elements for reaction and further input
- to mediate reactions as advantages and disadvantages
- to decide on one appropriate, achievable, and defensible comprehensive plan for statewide educational improvement
- to advocate plan acceptance by responsible agencies and institutions.

Many state education departments will not soon be able to play a full planning role; but they should at least be engaged in many aspects of the task outlined cooperating with other agencies in state government, higher institutions, local school systems, and relevant Federal agencies. State education departments, too, should be able to provide essential planning assistance services directly to local and other state educational agencies.

Moreover, state education departments may well establish regional or intermediate units (or strengthen them for planning purposes, if they now exist) which can effectively a) provide planning assistance to local school districts within a given area, including evaluative services, and b) assist the state in its statewide planning functions.

Finally, planning must relate to the political process. Programs and plans adopted must become both political and popular, that is, political leaders, meaning the legislature and the governor, must be persuaded that educational recommendations should be translated into annual legislative programs; and secondly, the people must be persuaded that the programs and actions contemplated are needed and should be carried out as they affect them. To achieve political responsiveness without abandoning professional responsibility is a fine art, and one that grows more important as education has assumed national and political importance.

If intelligence can be defined as anticipatory behavior, then long-range planning is a hallmark of excellence in state educational leadership.

Although alluded to earlier, it would be well to emphasize once again that state education departments will find it increasingly essential to confer and cooperate with such sister agencies of state government as the State University, health, labor, welfare, state councils on the arts, state offices of local government and regional planning, etc., in planning for curricular change and educational programming. Vocational education sectors of state education departments are more familiar with such cooperation. The point is that there will be an increasing number of specialized areas within the state education departments which will find it necessary to join with other relevant state agencies in cooperative planning.

PART VI. EVALUATION AND ACCOUNTABILITY

State education departments may have been exhorted for years to institute evaluation systems or systems of quality measurement and performance for determining the condition of education within their state borders, but not much has been accomplished. I prefer to dwell on "accountability" rather than use the soft and perhaps more humane term of "evaluation." The former makes a more visceral claim on one's attention.

Evaluation has two dimensions: One aspect pertains to measurement of performance in an educational system, the other to the outcomes of department-sponsored or -administered programs. Both external and internal evaluative research is needed for decision-making and long-range planning purposes.

Time does not permit a more detailed analysis of evaluative techniques and the importance of accountability. Just let me say that only those educators who are members of the Flat Earth Society are prepared to bet that the educational community will not be called upon to provide increased accountability to its many constituencies for the financial support received. Better evaluative techniques will need to be developed and employed in order to make more rational the decision-making process in education, for the sake of justifying additional support and of enhancing the teaching and learning process and its efficiency. It will not be easy in applying effective evaluative techniques to soft services.

PART VII. BENEFITS OF LONG-RANGE PLANNING

There are many benefits to be derived from long-range planning, programming, and budgeting. Some of these are:

1. It requires an identification and analysis of what is currently going on. The first step in long-range planning is to determine where you are. Unless you can draw a conceptual model of what you are doing, you are not clear on what you are doing. This point must be heavily stressed.

   In order to plan, one must know precisely the present condition of what one is attempting to plan. This is not merely to know what one is doing, or thinks he or his agency is doing, but to know the impact or effect of what that agency is doing. The biggest booby trap that innovators and change agents fall into is that they have not analyzed what is happening in relationship to what they expect to happen after they have made what they think is a change. They often create all kinds of mechanisms and arrangements which they think will change something but which will not change it because they have not analyzed carefully what they think they are changing.

2. It provides identification of common goals and objectives for the benefit of all. It forces us to answer the questions: What should be puzzling us? What should we be wondering about?

3. It marshals all available resources to accomplish goals and objectives for the benefit of all.

4. It forms the basis for interpretation of program objectives to the public, to supporters and critics of education alike.

5. It tends to eliminate proliferation of meaningless or marginally profitable programs and activities which do not contribute toward long-range goals or objectives.

6. It identifies alternate routes to achieve desired outcomes, thereby assisting in the elimination of rigidity

and inflexibility. Planning is the process of estimating future consequences of present decisions. One pays attention to this process in order to improve selection among present alternatives.

Planners assist managers in making better decisions by a) helping them in the process of making those decisions, and in the clarification (through forecasting) of the future consequences of various alternative decisions that might be made. Thus, it is, that I describe a memorable planner as one who outlines a courageous course of action--for others to follow.

The planning process must help to raise the time horizon of administrators beyond the annual budget or single school year. In elementary and secondary education, the planning period should be at least 15 years--the time for a child to complete nursery through high school.

A planner is a poser of alternatives to top management but is himself the manager of the planning function.

7. It permits targeting of budgetary resources in order to solve immediate problems as well as work toward long-range solutions.

8. It assists in identifying needed legislative changes which may be required in order to implement long-range goals.

PART VIII. KEY FACTORS IN SUCCESSFUL LONG-RANGE PLANNING

Let me now identify several key factors which go far to assure success in overall long-range planning.

1. A commitment on the part of the entire state agency structure from the State Board through all levels of staff. This kind of commitment to long-range planning should include the recognition that the planning process will ultimately be of benefit to all. If the State Board and especially the chief state school officer and his principal deputy do not make a favored commitment to planning, forget it.

2. An organizational pattern that provides the best climate in which to plan. This kind of organizational pattern should include the identification of specific decision-making levels, specialized full-time staff for planning, effective coordination of planning within the agency, as well as liaison with outside agencies and groups. This

is a day of participatory democracy: Pluralistic participation in long-range planning is essential.

3. A plan for planning which delineates responsibilities, guidelines and arrangements for preparing and using the plans.

4. Involvement of many groups and the training of staff at all levels before implementing a planning system.

5. An up-to-date comprehensive information system to supply the basic data necessary for planning.

6. Let me suggest the qualifications for the head planner. He should be young, imaginative within limits, constructively abrasive, and the brightest, if not the most experienced person one can find, and one who is unafraid to call attention at the highest levels, to even unpleasant truths and consequences.

7. Keep in mind that the decision-maker is ultimately the legislature and the Governor, not the agency head. The process of planning must service the legislature and the Governor, therefore, as well as the agency chief. The quality of legislative action is dependent upon the competence of educational planning.

   Since planning must blend political realities with professional technical competence, let me suggest that there are two kinds of extremely undesirable planners: Those mystical visionaries with both feet figuratively off the ground and whose notions literally are out of this world; and secondly, those with two feet firmly planted on the ground. As Joe E. Lewis used to say, show me a man with feet on the ground and I'll show you a man who can't put his pants on.

8. Statewide plans for education must be executed with and through local education agencies and institutions of higher education. A major focus in state planning must be on helping these agencies and institutions to plan better for themselves and on involving their representatives.

9. Keep in mind that a good planning system also breaks down administrative lines and organizes people differently.

   Imposing one or more task-force, mission-oriented planning projects on a classical, steeply hierarchical, bureaucratic structure of a state education department, unsettles the familiar, disturbs bureaucratic serenity, induces tensions, creates conflicts, and results in some social cost. The answer is simple: Usual fixed lines of authority are broken and neat areas of responsibility are made ambiguous; some personnel cannot adjust.

I keep telling my staff to keep loosey-goosey.

10. The best planning, though the most difficult, is qualitative and ends-oriented rather than quantitative and means-oriented. Both are necessary but one is more important and demanding than the other.

The key to comprehensive statewide planning in education is a staffing arrangement to provide for such activity. Valid planning activity requires trained personnel who have planning as their singular assignment. It has been found that when planning is a part-time activity of some staff, no planning of any consequence is done.

The full-time planning staff can also view program plans in an unbiased way and thereby provide some assurance that each element in the plan receives equal attention with respect to final decisions.

Two cautions are offered with respect to utilizing full-time planning specialists.

1. Planning staff does not have the specialized knowledge of program staff, therefore, it must rely on program staff for inputs and,
2. Program staff should not be asked to implement a plan they did not help to develop.

There must be a balance between planners and program staff, whereby each group's responsibilities are clearly established at the outset--and each understands that neither group can work alone.

PART IX. PLANNING AND VOCATIONAL EDUCATION

If I have made the case that long-range master planning of a comprehensive nature for the state's system of education is necessary, then let me make a case for the place or role of vocational education within the pattern of long-range planning in a state.

Long-range planning for vocational education is essential for the rational development of a state's educational system that clearly provides for the needs of all the people and the employment opportunities available within the state. Even without the requirement for long-range planning established in the Vocational Education Amendments of 1968, a state should be in the business of developing long-range goals and objectives and program plans for vocational education.

It is my deepest belief that planning for vocational education must be done as an integral part of the total system of education and not as a separable unrelated part. There must be clear relationships between all of education and vocational education. In fact it would seem difficult to me to see how a state could develop a long-range plan for vocational education without having a fundamental long-range plan for the total program of education in the State.

Without question, decisions made with respect to program development and resource allocation in vocational education will have a clear-cut effect upon allocations of resources both financial and educational in an entire school system or, for that matter, an entire state program. The program structure prepared for a total comprehensive plan for education in a state should have a significant component devoted to vocational education. Planning for vocational education should fit within the matrix of levels of program and categories of people just as it is done in other portions of the educational system.

If this system is followed, then objectives can be compatible and the basis for cost-analysis and budgeting can be the same, irrespective of the program under discussion. Decision-making with respect to the allocation of resources and the priorities for the state's educational system can be made in a manner which will best benefit the state.

It would seem to me that where vocational education planning is developed as a part of the total framework, implementation of plans and objectives would occur more rapidly and more easily.

You cannot separate the several major program areas in a state system of education and plan each within its own sphere of influence without regard to the others. To be effective, the barriers and fences between program areas must be taken down. Too often, vocational educators and academic subject matter people have viewed each other something like the pompous Church of England Bishop regarded his non-conformist colleague, to whom the Bishop said one day: We are both doing God's work: You in your way and I in His.

Taking the position I do with respect to the placement of vocational education planning within the context of the whole, I would like to discuss for a few moments the recently completed state plans for vocational education.

I believe that the state-plan system utilized under the present Vocational Education Act, which contains a long-range plan as well as an annual program plan, is a reasonable and necessary one. The state plan system provides for reasonable accountability and stewardship of Federal funds allotted to a state. But, in addition to the matter of accountability, there are other values as well for the state plan system.

1. It puts vocational education in its appropriate place within the context of the total educational program.

2. It requires the involvement of many groups of people, both at the local and state level, and therefore provides a means to interpret the scope and role of vocational education within the state to many, many people.

3. It provides the framework for direction of program development at the local and regional level.

4. It identifies problems and concerns, strengths and weaknesses, and allows for decision-making with respect to resources and efforts applied in areas of greatest need.

5. The pattern established in the long-range and annual program plans permits clear-cut evaluation and accountability at the end of each year.

Now unless your state is different from New York, you and your staff have spent many precious, tedious and frustrating hours in producing the state plan and meeting a June 30 deadline. I have taken the position that the state-plan concept is a good one, and I believe that the long-range plan and annual program plan should be invaluable working documents within a state. The degree to which the state plan for vocational education will be beneficial to each of the states will be in direct proportion to your responses to some of the following questions:

1. Is that state plan meaningful for the direction of your state program of occupational educational education, or was it prepared solely to comply with the requirements of the Federal Government in order to qualify for Federal funds?

2. Is the state plan really a plan or an information document? Are the data presented reasonable and valid for planning and implementing the program of vocational education in your state, or does the plan contain the kind of trivia which gets in the way of identifying the large problems?

3. Is the form and pattern of the state plan something which can be used within the context of a total system of planning in a state, or is it so designed that it is usable only within the framework of vocational education?

To me the state plan for vocational education should be a document usable within the state. It should be designed in such a manner that it is understandable as a planning document by all the parties concerned within the state. It must be compatible with a planning-programming-budgeting system in the state, if the state has one. I believe that the data collected and used in the preparation of the state plan should be those which are necessary and directly related to the planning requirements. Data which may be helpful if aggregated at the national level to draw some conclusions with respect to a total direction of vocational education, nationwide, should be collected separately and not placed within the framework of the state plan.

If the state takes seriously the work of developing a state plan for vocational education within the structure I described, then such activity is a full-time, year-round responsibility and can, in no way, be considered a seasonal responsibility of part-time staff. It has been our experience that to develop a plan which must go through all of the procedural steps described in law and regulations and be submitted sometime in May of each year would require a minimum of five to six months of staff time. If a real job of program planning and budgeting takes place in a state and all the steps involved, including such things as cost-analysis and examination of alternatives, are utilized, the task becomes an even more complicated one.

I believe strongly enough in the system of planning that I do not in any way feel concerned about the commitment of staff time to do an adequate planning job. I do, however, concern myself with the fact that there must be an understanding at the Federal level of the time constraints within which a state must work, that the states are different in their needs, requirements, and methods of operation, that the states have developed various levels of sophistication in the planning system and that much patience and understanding must be offered at the Federal level. I am sure all of you will agree that you cannot implement the system proposed in the Vocational Education Act in one year. It will take time, and effort, and cooperation on all parts to achieve the true results the Congress intended.

I have two final comments. First, no plan or planning process or organizationals can be translated in total from one place to another. Personalities are involved for one thing, as well as size of organization.

Secondly, planning need not require elaborate methodologies, extensive computers, or large planning staffs. In any agency at the present time, planning can begin with consideration by top management of the objectives of the agency, then, an assessment of current agency activity, an estimate of resource reallocation to achieve the objectives, a consideration of organizational procedures, and a provision for assessment of plan execution.

PART X. CONCLUSION

I would regard the state administratorship of the future if it is not to become obsolete, as one which is engaged primarily in planning for the future in the light of rapid change and current issues and trends, that planning which has been called the "masterful administration of the unforeseen," employing "skill in navigating areas of ignorance." The essential new attitude in leadership is to feel comfortable with change, to plan for it, to master it, and to control it--even by deliberately contriving change.

The future belongs to those who prepare for it.

And finally, the future state administrator must be willing to be held more accountable, to engage in more rational decision-making based on objective evaluation of the educational process.

Perhaps it would be profitable to conclude with an examination of the nature of leadership.

Let us not confuse administrative ability with leadership qualities. Administrative ability many people and agencies have. It is, I need to remind you, merely facilitative and only instrumental; it gets acceptable or familiar things done. It is a stabilizing force.

Leadership ability is constructively abrasive and influences other people to do things they ought to do, even when they don't want to. Leadership ability is anticipatory, creative, and innovative and points to a better way. Power is the capacity of administration to coerce, while influence is a capacity of leadership to persuade.

Good administrators have the capacity to expand and develop other people's ideas and plans. Real leaders create them.

C. Northcote Parkinson of enduring fame, once published some definitions in his inimitable style which are appropriate here:

Skill, he said, is the capacity to do something which is not particularly easy. Ability is the capacity to get things done mainly through the effort and skill of other people. The violinist has skill; the conductor has to have ability as well. Leadership is the art of so indicating a distant goal as to make all else seem trivial.

We are in an era, as someone has said, where the "tidal wave of change threatens the cherished orthodoxy, the sacred traditions, and the ancient assumptions. . ." We do not precisely know where the future lies but we know we have to prepare for it.

As Robert Theobald has said, "it is the task of education to make the impossible seem relevant." The new world will not be our world." he says in *Education For A New Time*. "It will be created by young people who know how to live in a new environment. . . Within this framework I challenge you (educators) to be willing to work for something you may dislike, to accept things you cannot understand, and to start a process, the conclusion of which is uncertain and probably undesirable to many of us." I am reminded of a stirring passage, an anecdote, in a contemporary novel. It is from the epilogue of *Captain Newman, M.D.* by Leo Rosten.

Destiny came down to an island many centuries ago and summoned three of its inhabitants before him. "What would you do," destiny asked, "if I told you that tomorrow this island would be completely inundated by an immense tidal wave?"

The first man, who was a cynic, said, "Why I would eat, drink, carouse, and make love all night long."

The second man, who was a mystic, said "I would go to the sacred groves with my loved ones, and make sacrifices to the gods, and pray without ceasing."

But the third man, who loved reason, thought for awhile, confused and troubled, and said, "Why I would assemble our wisest men and begin at once to study how to live under water."

A president of a university was once asked what had become of his last graduate dean. His reply is memorable: "He left us as he came--fired with enthusiasm."

May this conference leave you fired with enthusiasm to make long-range planning a favored commitment.

Nothing succeeds like surcease. I have been reminded that remarks do not need to be eternal in order to be immortal. Someone has remarked, too, that old bankers never die; they just lose interest. I hope I still command yours.

Former President Kirk of Columbia has observed, too, that even though he was many years removed from the university classroom and the stipulated 50-minute lecture, he never forgot the comment of one of his old professors. He said, "Gentlemen, we each have two different obligations. It is mine to talk and yours to listen. If you finish before I do, just raise your hand."

Well, before someone does raise a hand, let me finish.

In closing I should like to pay a sincere compliment to your profession by concluding with a story whose point transcends the inelegance of the tale:

A noted editor from the South, weighing 300 pounds, was invited to speak on a solemn occasion in Ashbury Park, New Jersey, before a gathering of 10,000 people. He arose as he was called upon, and just as he began his opening remarks, his trousers unaccountably loosened and fell to the floor before all 10,000. Parenthetically, it seems to me it would have been just as disastrous had only 5,000 people been present.

Feeling himself thus exposed, the bulky speaker looked down, surveyed his misfortune briefly, deliberately and with great dignity and cool, retrieved his trousers, rehitched them, and in a memorable comment said: "Down where I come from, the more we see of one another the better we like each other."

So, the more I see of vocational educators, the better I like them.

Biographical data for Ewald B. Nyquist:
Undergraduate and graduate work at the University of Chicago, 1932-1941; Holds honorary degrees of Doctor of Laws from Hartwick College, Canisius College, St. Francis College, Juniata College, Alfred University, Manhattanville College of the Sacred Heart, Gettysburg College, and Ithaca College; Doctor of Pedagogy from St. John's University and Niagara University; Doctor of Humane Letters from Fordham University, Yeshiva University, and Geneva College; Doctor of Civil Law from Pace College; Doctor of Letters from Lebanon Valley College; Doctor of Science from Union University--Albany College of Pharmacy; and a citation from D'Youville College; United States Naval Reserve from 1941 to 1945 now holding the rank of Lieutenant-Commander; Director of University Admissions, Columbia University 1945-1951; At the New York State Department of Education since 1951.

SECTION II

Planning Within the Political Structure

Manpower Development--
Who Will Have the Responsibility

LOWELL A. BURKETT

Executive Director
American Vocational Association
Washington, D. C.

It is always a real pleasure for me to have the opportunity to appear before the state directors of vocational education. I consider each of you as Mr. Vocational Education in your state. From time to time, I need to have the opportunity to bring before you some of the problems and the issues which we face in AVA. We need your advice on Federal legislation and the direction that the AVA must take.

We are faced today with the most complex problem we have encountered for many years. This problem concerns the future delivery system for vocational education. How the delivery system will be structured and what part the U. S. Department of HEW, the U. S. Department of Labor, the state departments of education, the state departments of labor and other agencies at the state level, will play in the future delivery system for vocational education is the critical issue being raised in Federal legislation currently pending before Congress.

This nation has never had a national manpower policy. Parts of such a policy have been evolving over many years, going back as early as 1889 with the passage of the Morrill Act. Vocational education has been a part of this evolutionary process. The Federal vocational education acts have contributed substantially over the years to manpower development, and have been the major instrument whereby people were prepared for the labor market.

The Full Employment Act of 1946 called for an expanded economy that would provide a job for everyone able to work. In 1962, the Congress determined that full employment could not be realized unless those who had been left behind in our society received special education and training and other services to help them enter the labor market. The Manpower Development and Training Act resulted. The part that vocational education would play in the delivery system in this Act was not included in the original draft of the legislation. The AVA took the leadership in seeing that vocational education was written into the MDTA. There have been many problems in the administration of the MDTA because vocational education was not the principal agency in the delivery system.

Since 1962, there have been additional pieces of Federal manpower legislation enacted, as well as programs growing out of legislation that was already on the books. We have come to the point where the current manpower programs are a confusing complex of patchwork legislation resulting from a proliferation of inefficient multiple delivery systems. There appears to be a lack of national manpower policy requiring careful assessment of the needs balanced against available resources. Although activities of various programs have focused upon the disadvantaged in our society, some activities have competed for trainees and worked at cross purposes with other programs. There has not been sufficient coordination of these efforts to provide program breath, to permit flexibility necessary to tailor the program to the needs of individuals and to satisfy the specific problems of local communities.

The critics of the existing manpower programs and the bills currently pending before Congress contend that the total impact of current manpower programs is ineffective as a deterrent to social ills and lacks the essence of a national manpower policy highly related to employment and unemployment balance.

There are three major manpower bills currently pending before the Congress. H. R. 10908 was introduced early this year by Congressman Steiger, Republican from Wisconsin. The contents of this bill were influenced by the labor economists' point of view. Following on the heels of H. R. 10908 was another one--H. R. 11620 whose prime sponsor was Congressman O'Hara, Democrat from Michigan. This bill had the endorsement of 105 members of Congress.

The Nixon Administration also gave a great deal of attention to the establishment of a manpower delivery system and introduced a bill in the Senate (Senator Javits, New York) and another in the House (Congressman Ayres, Ohio). These bills have, as their major purpose, the coordination of programs and activities that make up a manpower delivery system which provides an opportunity for every American who is seeking work to obtain the education and training needed to qualify for employment which is consistent with his highest potential and capability. Educators are becoming alarmed that these bills will set up a dual system of education in this country. I would say that we already have, not a dual system, but many systems of education under many auspices.

Since 1962, we have had many pieces of legislation that have set up multiple vocational education systems. I believe that most educators are concerned that the consolidation of all manpower legislation under the administration of the U. S. Department of Labor will set up a Federal bureaucracy that will overshadow the Federal bureaucracy that has administered the vocational education programs and thus threaten the role of education in manpower development.

I have had many sleepless nights, not necessarily just recently, because I have been a member of the National Manpower Advisory Council for about three years. I knew that the introduction of this piece of legislation was inevitable. I saw the rationale developing and wondered how we could oppose some of the concepts that were in the legislation. I have had many conversations with individuals about the legislation. In June, I called into Washington a group of individuals who had contacts with Members of the House and Senate who were prime sponsors of the proposed legislation, and asked them to consult with their congressmen about the intent of the legislation and its prospects for passage. I have met with educational association officials representing the chief state school officers, school administrators, secondary school principals, junior colleges, the Council of State Governments and the Governors' Conference. I called a national legislative seminar in Washington last week with the major purpose of giving those who came an opportunity to find out the intent of the legislation.

There is frustration on the part of many people because of the many factors that currently exist. I would like to spend a few moments relating to you what I consider to be some of the factors we will have to take into consideration when we deal with this proposed legislation. First is the need for a consolidation of manpower programs--the duplication, overlapping and inefficiency of many of these manpower programs must be resolved. And we cannot as taxpaying citizens of this country, and as professional people concerned about the welfare of individuals, deny that we have to have these many manpower programs coordinated and an efficient delivery system developed. This purpose of the proposed legislation cannot be overlooked.

Another factor we will have to consider as vocational educators is that manpower development is more than just education and training. There is a need for auxillary services for the disadvantaged individuals, such as counseling and guidance, stipends and other services that are currently provided in the manpower programs.

The Congress and the Nation as a whole are committed to developing a program that will make people employable. This program must be operative; it must be viable, and it must be dynamic because people are out of work, cities are being burned down, and there is a great social unrest. The Congress is greatly concerned and intends to do something about it.

Another factor we will have to consider is that the track records (and by track records I mean the past performance of the various agencies who are currently delivering the manpower programs) have not shown programs to be totally effective. I think we would have to say that we in education have not really taken care of all the people needing vocational education; especially have we not been concerned about the disadvantaged.

Another factor we have to take into consideration is that the agency currently delivering the vocational education programs is really not committed to doing the job. You who were at the legislative conference last week became fully aware that delivering a manpower program through Health, Education and Welfare would be a very difficult task, if not impossible. Our experience in recent years points up a lack of commitment, a lack of real leadership, and the inability of that agency to deliver the financial resources needed to do the job. So what I am saying is that there is some question in our minds as to whether the Federal agency that is delivering vocational education leadership and resources can or will deliver in the future. I could go further and say that education leadership, in general, has really never been concerned about education and training for out-of-school youth and adults. This is not a reflection upon you as vocational educators, but the people in policy-making roles at the local, state and national levels who have not really considered vocational education programs for out-of-school youth and adults as their responsibility.

Still another factor we have to consider is that the Department of Labor's major concern is manpower. If this were removed, there would be no real mission for the Department of Labor. Manpower is its major concern--it has first priority. The Department of Health, Education and Welfare does not make vocational education a priority item; in fact, education as a whole has low priority as evidenced by yearly budgetary considerations. Vocational education has the lowest priority of all education programs in HEW.

We also must consider the fact that vocational educators are suspicious of labor's commitment to education. On the other side, labor is suspicious of vocational education's concern for meeting manpower needs. This suspicion does not exist as much in 1969 as prior to 1963, before the vocational educators first began to consult and work with the Employment Service. A growing relationship is developing between these two agencies, but much suspicion and distrust still exists.

Essentially, I believe that Congress (and this is the body that is looking at the manpower issue) is saying, and has been saying since 1963, "For God's sake, get together and perform the task of manpower development!" They were saying this to us very strongly in the 1968 Amendments. I think Congress is saying that unless we can develop a strong working relationship with the agencies of the U. S. Department of Labor, they will give the responsibility for manpower training for out-of-school youth and adults to the Department of Labor that has a real commitment to this program. This is my assessment of the situation. There are things you should take into consideration in making a decision as to what kind of manpower legislation we will support in the years ahead.

Certain members of Congress have made their own assessment of the situation and spelled it out in the proposed legislation. I do not know how many of you have read the bills, but I think it might be well if I would take the time to point out their assessment of the situation today because the following points reflect the thinking of many members of the body that will finally make the decision in regard to manpower legislation.

First, the proposed legislation says that Congress finds and declares that the Nation's prosperity, economic stability and productive capacity are limited by a lack of workers with sufficient skills to perform the demanding production, service and supervisory tasks necessary in an increasingly technological society At the same time, there are many workers who are unemployed or are employed below their capacity who, with additional education and training, could make a greater contribution to the Nation's economy and share more fully in its benefits.

Second, the problem of assuring meaningful employment opportunities will be compounded by continued rapid growth of the labor force. It is imperative that these new workers, including the many young people who will enter the labor force, be provided with academic and vocational skills which will allow them to work at the level of their full potential.

Third, the placement in private employment of unemployed, underemployed, and low income workers is hampered by the absence of entry-level opportunities. These opportunities can be augmented by assisting workers now in entry-level jobs to improve their skills and advance to a more demanding employment.

Fourth, the expansion of public service employment opportunities for unemployed, underemployed, and low-income persons will allow the Nation to meet more adequately the unmet, unfilled public needs in such fields as health, recreation, housing, neighborhood improvement, public safety, maintenance of parks, streets and other public facilities, transportation, conservation and other fields of human betterment and public improvement.

The Congress says that the public and private educational system should have the major responsibility for providing the academic, technical and vocational training opportunities necessary to prepare attending students for the world of work. This system must be strengthened to achieve its goals and its success is critical to lessening the need for remedial manpower programs. But where effective opportunities have not been provided to individuals, or their access to them continues to be restricted, remedial services should be provided as a part of our Nation's manpower program. I think Congress recognizes that we in education have a responsibility for meeting manpower needs, but where these have not been provided, there is a need to establish a system to deliver these services. Congress believes that improved training and employment opportunities are vital to developing the capacity for self-support by public assistance recipients. The manpower system must assume special responsibility and accountability for training, placing and upgrading these people.

Experience has shown that the administration and delivery of effective manpower programs are extremely complex matters requiring a more comprehensive unified and flexible approach in the active cooperation of employers, employees and other public and private agencies, individuals and organizations. The effectiveness of manpower programs would be improved by a more coordinated approach in evaluating the needs of the individual participants and mobilizing available resources to meet these needs. It is, therefore, the purpose of the legislation, as proposed, to establish a comprehensive and coordinated national manpower program involving the efforts of all sectors of the economy and all levels of government. The program should be designed to provide greater opportunities for training and related services necessary to assist individuals in developing their own economic and occupational potential.

Ladies and gentlemen, I believe this is the sentiment of the Congress at the present time. They believe that education must meet the education and training needs of all people. They believe that vocational education must be expanded. They believe that current programs have not delivered to the extent that they should, and that there must be a system that will deliver the kinds of services needed to make all Americans employable.

What do these proposed bills do? When we look at them from the delivery system standpoint, they say that the one agency at the Federal level that can provide and deliver the resources, the commitment and leadership is the U. S. Department of Labor. Second, Congress believes that this system must be geared to the political structure at the state level. Therefore, they would place in the hands of the governors and mayors the responsibility for establishing a comprehensive manpower agency that would be responsive to the needs and desires of people in the states and municipalities.

The Javits bill spells out what would constitute a manpower agency at the state level. Although this is not a concept included in the other bills, it is one that is getting a great deal of consideration. The Javits bill says that this comprehensive manpower agency should include the employment service, the unemployment compensation agencies unless specifically exempt by the Secretary, agencies administering or providing for administration of programs authorized under the Act, agencies established by state law to administer manpower programs or program components not assisted by the Federal acts, and agencies administering programs authorized by other vocational education acts. This bill does say that vocational education shall be included in the manpower planning at the state level.

The Javits bill proposes that there be three stages in the Federal funding of the state manpower agency. As soon as a state has identified a lead agency that has the planning capability, 25% of the funds allocated to the state would automatically come to a state after identifying the agency and indicating its capability. At such time as this agency becomes operational and a manpower plan is worked out, 66-2/3% of the money would come to the state. After the state agency has performed in an exemplary fashion and has shown that it could deliver the services needed to the people, the remainder of the funds would be allotted. If the states do not perform in accordance with a manpower plan, the money would be available to the Secretary of Labor to go immediately into those states and establish some kind of a delivery system or a program that would meet the needs of the people.

There are many activities in which this proposed manpower bill would engage, and many of these you will recognize as the responsibility of education. Let me just name a few of them: basic education, including literacy and communication skills, counseling and guidance, orientation to work discipline and the work situation, institutional and on-the-job training, all kinds of supporting services, work experience for unemployed and disadvantaged and part-time work for students in grades nine through 12. There are several other activities which I will not take the time to mention. I am sure you have identified these activities as major responsibilities for education.

I have tried to refrain from making any judgment as to how these bills should be written. I am sure of one thing, that the Congress is going to be struggling with these bills, and I am sure they are going to listen to a lot of people. The hearings will be quite extensive. The point of view of education must be made clear as it relates to serving the manpower needs of people and the consequences of the proposed delivery system. You, your school administrators, chief state school officers and people who have a knowledge of what education should and could do for manpower development should try to interpret this for Congress. You, as vocational educators and leaders in your state, are going to have to take the responsibility for helping Congress interpret the consequences of the proposed legislation since they do not really understand the role that vocational education plays in the total manpower effort. I am amazed when I talk to a lot of educators that they really do not understand the role of education in manpower development. To get over the point of view of the vocational educator is going to take one of the most dynamic programs and the greatest effort on the part of vocational educators that we have ever exerted. I am greatly concerned. I hope that with all of your support, your best judgment and best thinking, we can and will enact a piece of legislation that will make certain the education and training needs of the people are met through vocational education.

Legislation is a process of give and take. We cannot write an amendment to a bill today that is going to be enacted. We have to have some basic concepts that we stand for and which have the support of our members. As we move through the legislative process, you will be informed of where we are and you will be asked to react and get others to react with members of Congress.

This ball game is different. We are playing with a different set of rules--ones that we haven't played with before. We are playing with a new group of players, working with a different committee of the Congress, and we have fewer troops in support of keeping out-of-school youth and adult vocational programs in education than we have for other aspects of vocational education. It will be a tough game, and if you don't think it's going to be, just take it easy and see the results when it is over.

Planning Within the Power Structure

JOHN A. BEAUMONT

Consultant, Vocational Education
Bradenton, Florida

I would have to say to you my colleagues and friends, that I was quite reluctant to take on this particular responsiblity. I know the practical expertise in this audience in relation to political action. What background do I have that will enable me to make a contribution to a discussion entitled, Planning Within the Political Structure? Since 1957 I have been privileged to make numerous presentations to this group. It may come as a surprise to some of you who know me as a distributive educator and a vocational educator to learn that the great majority of my education beyond the secondary level has been in the fields of political science and economics. This political theory combined with some practical experience may help me to bring to you some basic political concepts that have relevance to your planning for vocational and technical education.

The question may immediately arise as to what is the relation between political know-how and long-range planning. My experiences with Governor Kerner in Illinois may help to answer this question. When I made a suggestion or a proposal the final questions were "How are we going to get this done?", "How are we going to move the proposal?" These are the basic questions you have to ask yourself in regard to long-range planning. How are we going to do something about this problem in a democratic society?

The answer to this question implies that you will have to move your plans through some kind of a political structure probably through elected or appointed officials who have the authority to make decisions. These decisions will not necessarily be the personal opinions of these officials but rather will reflect the expressed wishes of the electorate which is responsible for the appointment or election of these officials.

I have reached the conclusion that there are two major forces, or a combination of these forces that cause responsible officials to give consideration to projects or proposals. One, things move because they have economic implications. The proposal is seen as a means of bringing about an economic activity or change that is held to be desirable. As an illustration Governor Kerner would ask, "What new business will this bring to Illinois?", "How will this project generate new taxes?", "How many new employment opportunities will result?" or "What will happen to the economy of the State if we adapt this suggestion?"

The second major force is the social implications involved in the proposal. Every official is confronted with social problems ranging from riots to welfare and health. Such questions arise as the following, "What will this proposal do to lessen the tensions in the ghetto areas?", "What contribution will this suggestion make to the alleviation of suffering and malnutrition?", "What will this project do to bring about a lessening of the unemployment rate among minority youth?" In many cases there will be a combination of the economic and social problems for one frequently is the cause of the other.

Thus if you wish to move your plans you will relate them directly to the economic and social problems and concerns of those who will decide whether your plans will move or be side tracked. You will be concerned not only with the plan itself, but also with the interpretation of the plan in regard to achieving desired economic and/or social goals. Vocational education has made great strides recently because those in authority see it as a means to solving many of the nation's social problems. In spite of this many vocational educators still reject the social contributions of vocational education because through false pride they feel that vocational education will be downgraded if it responds to the needs of the disadvantaged.

Now I would like to make a few comments about the political situation in which you find yourself. First, it is evident that society is looking at the professional person in a different light. The professional is no longer sacred per se. His opinions and decisions are questioned, and are no longer accepted because these opinions have been expressed by a professionally trained person. A professional person can gain respect and stature if he is able to demonstrate that he can use his expertise in a successful and acceptable manner.

Second you are dealing with a society that is better educated and has found within itself a capacity to organize groups for the purpose of achieving desired goals. This capacity to organize has been one of the greatest forces for change in our society. We have found this capacity in community groups, in minority groups, and in youth groups, all of whom exercise a variety of pressures on officials. We need to be conscious of these groups, and the response of these groups to the plans which we institute for vocational education.

Third, there is a change in the community structure which has not been generally recognized. I emphasize the community to you even though you think primarily of state and national concerns, for the implementation of your plans is still at the community level. The junior or community college district and the school district are still community activities, and that is where your program succeeds or fails. The introduction of the corporate structure has tended to reduce the influence of the powerful families in the community structure. The manufacturing plant, the retail establishment and in many cases the bank is part of a corporate structure which is controlled outside the community. The representatives of these corporations in the community are a moving group and do not generally remain for a long period in one community. Their interests are in moving upward within the corporation, and their community involvement is only temporary. The result is that local organized groups usually of a political nature have filled the vacuum created by this change in the business structure. Particularly do you see local groups taking over a major role in educational matters.

Fourth, you see the development of a society in which every man considers himself king. At one time the majority was accepted as being the answer to every question. Today the majority or establishment is distrusted, for it has been found that the majority has frequently been a kind of mass which has been manipulated like a ball of putty. With the concept of every man a king, the administrator is constantly faced with the individual who steps out of line, criticizes the on-going activities, and makes every effort to force his personal views on the majority. He may not succeed, but he does cause trouble and confusion.

The question still remains, "What can you do to move and implement your plans?" There is no simple answer. Probably the one basic approach that you can take is to develop a series of strategies to meet every concievable opposing force. In a professional football game each team must develop a series of offensive and defensive plans. Which plan is used depends on the actions and decisions of the opponent. In like manner political planning requires the development of a series of strategies, the use of which will depend upon the question and the reactions of the decision making officials.

In brief one must do his homework diligently. His plans must be well prepared and well understood. One must know who is to make the final decision, what relation the plan or proposal has to the problems of the decision maker or makers, what forces support the decision maker or makers and what compromises can be made without destroying the project. In every case be prepared for the unexpected and be wary of the obvious.

Political Aspects of Planning

B. DEAN BOWLES

Educational Administration
University of Wisconsin

Education is one of the most thoroughly political enterprises in American life. Yet one of the most intriguing and fascinating myths is the oft quoted admonition: "keep politics out of education, and keep education out of politics." Moreover, the future portends an even closer engagement between politics and education for several obvious reasons: 1) American schools will be educating more people for longer periods of time. It can be safely predicted that people will be experiencing institutionalized education from age two or three through 24 or 25 within the next ten years. 2) This commitment to education will increasingly involve Federal and state governments in both funding and control over educational policy. . . a patently political function. In short, localism will undergo rapid reorganization, and there will be a tendency for increasingly centralized control over public policy in education. 3) Schools--and particularly vocational schools--will continue to be the focal point around which society will attempt to periodically renew itself. We are only now experiencing the political trauma as our schools are again becoming the vehicle of social justice. This deeper commitment will mean greater public interest and involvement and undoubtedly increased public political pressure. Decision-makers will cease asking "how much more for the same schools to the same end?" and rightly begin to ask "what new kind of schools?", "at what costs and whose benefit?" and "for what (objective and measurable) purpose?" In short, public vocational education has been political, is increasingly political, and will tend to be even more political in nature.

But if education has been one of the most thoroughly political enterprises in American life, then why did I suggest that the separation of politics and education has been mythology? One good reason has been that the myth of separation has been serviceable in the exercise of power, for it has defined and institutionalized the jurisdictional arenas of political influence. It has helped professional educators develop a degree of independence from the mainstream of politics and government: e.g., separate elections, separate tax jurisdictions, and separate executive and administrative control. In perpetuating the myth, education has to a large degree insulated itself against some of the naked ruthlessness and crass corruption of city and state politics. Simultaneously, educators have been able to divorce themselves from such appellations as "politician," "corrupt," and "self-serving," thereby increasing their political effectiveness in an arena where being equated with "missionary zeal," "incorruptibility," and "altruism" were definite political assets.

The separation of politics and education has a corollary in the process of professionalization. Professionalization has, more than any other factor, developed a common body of knowledge, ethical standards, words, symbols, and routes of recruitment necessary for a homogeneous, a political body among educators. The professional is, by virtue of these qualities, set apart. Therefore, to describe the professional as a "politician," or to describe his activity as "political," is to shatter this image. Of course, it would be the ultimate of naivete to suggest that politics does not enter into the activity of the professional. But it is a politics of a different sort: it is a politics of the priesthood rather than the politics of the market-place. The politics of the market-place is visible and thrives on the adversary process and the resolution of conflict. The politics of the priesthood is more hidden, shrouded in the mystery and intricacies of inter-personal relations, and subsists on the development of consensus.

Significantly, the state politics of education is experiencing a shift from the consensus politics of the professional priesthood to the conflict politics of the public market-place. A change in the state politics of education from consensus to conflict has important implications for the future of public policy formulation in education, and particularly for educators involved in comprehensive planning. What follows is a discussion of some of the principal features of the political universe which characterize the shift from consensus to conflict politics and which are vital to overall state-wide planning in education.

First, while political parties and personalities have sometimes shifted in our state legislatures, the pattern and style of legislative politics has been somewhat of a stable constellation in an otherwise changing universe. However, this constant is fast becoming a crucial variable, and one with significance for planning. The most salient feature of legislative politics is the perceptible shift in both the style and the process of formulating public policy. More specifically, the factional one-party and two-party systems which have tended to dominate legislative politics are evolving into partisan competitive two-party systems. Moreover, this change is accompanied by a concern and involvement in the details, planning, and execution, and assessment of public policy. Factional legislatures have been comfortable for vocational educators, for factionalism and consensus politics go hand-in-hand. Because factional legislatures are typically organized around personalities, quirks of geography and history, and in-house leadership cliques rather than partisan political philosophy, there is little motivation to develop systematic programs of public policy. Indeed, most public policy development and initiation is dispensed to the special interest groups: alcoholic beverage control policy to the beer and liquor lobbies; highway policy to the highway lobby; and conservation to the conservation lobby. Vocational educational policy has been no exception. On the other hand, partisan, policy-oriented legislatures are discomforting to vocational educators, for with partisan competition comes conflict politics. Such a legislative atmosphere is conducive to the development of sound public policy proposals which are firmly based in a party's political philosophy. Personality politics, geography, and special interests are not obviated; they are, however, accommodated within the broader ideological base of partisanship. Hence, public policy is not decentralized to the various interest groups but becomes the fabric and the raison d'etre of the partisan political process.

Second, governors' offices and legislatures are becoming more and better staffed. Staffing equips governors and legislators to provide meaningful public policy alternatives. This is particularly true in the instance of vocational educational policy where the intricacies are enough to make the experts weep. Without a loyal, competent, and independent staff, governors and legislators must by necessity relinquish policy jurisdiction and ultimately defer to and rely upon expertise drawn from vocational educational interest groups. With staff, vocational educational groups do not have a monopoly on expertise, information, or research capabilities, and a competent staff can generate, initiate, and realize new directions in public policy. Staffing is both a function of and benefits from the development of competitive, partisan legislatures.

Third, accompanying the changes in government described above is a breakdown in the monopoly of expertise on vocational education held by vocational educators. Professional educators have cultivated a norm of "leave it to the experts" which has encouraged government to abdicate its responsibility in providing positive, independent policy alternatives. In short, public policy, and vocational education, is becoming too important to be left solely to professional educators. Of course, expertise is a vital political resource, but nothing is more debilitating to that resource than a persistent countervailing expertise, particularly one which is closely allied with the locus of decision.

Fourth, the sense of conflict politics is heightened today by the proliferation of groups which have been either disinterested in public policy in the past or which were excluded from meaningful involvement in policy development. This allowed for a comfortable consensus among vocational educators, their satellite non-educational interest groups, and allied legislators. Independent government policy initiatives, teacher unionism, student militancy, Black power demands, and right-wing activity, all refuse to participate in the customary consensus pattern and demand policy by conflict resolution.

Fifth, professional educators have avoided any assessment of the impact of their policies and institutions. At best we have examined our input (e.g., cost-per-student, number of M. A.'s) and granted the public the benefit of our professional wisdom and judgment based on little more than "gut" feelings; at worst, we have either done nothing or rationalized that assessment was impractical, impossible, or unwise. All that is changing. The public and its representatives are demanding some criteria measures, some measurement of output, or some assessment of impact in exchange for political support and economic subsidy.

Sixth, traditionally, vocational education interest groups have been organized into a monolithic structure of influence dominated by small cliques of "voc-ed" men which brought about consensus over public policy. However, that does not mean that differences and conflict did not exist. On the contrary, basic differences did exist, but they were accommodated within the monolithic influence structure of the established influentials. From that accommodation has emerged a single policy initiative into the larger system or arena of state politics. Furthermore, vocational education has been blessed with a monopoly, for the consensus derived from the accommodation was the only policy initiative in the larger system. Hence, "voc-ed" people have been accustomed to a non-competitive, monopoly of public policy initiatives with considerable control over the participants and arena where policy is accommodated. This pristine state of affairs is changing too. Whereas the consensus pattern saw conflict accommodated within the vocational interest groups and that accommodation serve as the single policy initiative in the state political system, the present conflict period witnesses multiple policy initiatives in the larger political policy arena. The result is that the locus of accommodation shifts from within the "voc-ed" group(s) to the public policy arenas (government). A change in the state politics of education from consensus to conflict along with the corollaries of single vs. multiple policy initiation and the shift in the locus of accommodation from within the monolithic influence structure of the "voc-ed" interest groups to the broader public policy arena has important implications for the future public policy formulation and particularly for those involved in that process.

Seventh, and finally, decision-makers are beginning to question the ability or willingness of the professionals to bring about or execute changes in public policy. The skepticism ranges from questions of technical skill to issues of conceptual understanding of contemporary problems to level of commitment for any change not consistent with existing professional interest. The responses by decision-makers have had common denominators, namely: 1) less reliance on professionals in the decision-making process; 2) assumption of the policy initiative; and 3) bypassing the established structure and funding patterns with new organizational dimensions and financial patterns.

In summary, I have suggested at least seven important changes which are occuring--at different rates to be sure--in the fifty states:

1. Partisan, competitive policy politics evolving from factual, non-policy oriented legislatures;
2. Increased staffing and professionalization of legislatures and governors' offices;
3. Decline of the professional educator's monopoly on expertise and rise of a broadly shared competence;
4. Proliferation of groups which refuse or cannot be accommodated in the customary pattern;
5. Focus on objective, hard-data assessment of policy impact as the criterion measure of effectiveness;
6. Increase policy demands and a shift in the locus of political accommodation to government; and
7. Less reliance on professional educators in bringing about and executing new directions in public policy.

These factors suggest that more than mastery of planning techniques and "knowing the system" are necessary to planning in the states. Specifically, it requires that the entire "guild" system of management and leadership development be examined critically and perhaps overhauled to allow for change and adaptation from within. It probably demands more than pre-service and in-service education of current personnel; it may demand an entirely new route of recruitment into vocational education policy positions by persons not heretofore accommodated within the "guild." It will also require the tapping of new and unused political resources, the forging of new alliances both within and without the traditional patterns, and developing political styles and techniques suitable for each change as it occurs. Certainly there will be requirements for escalating the level of research, information, and expertise in order that the qualitative level of the various alternatives will be optimized; this is particularly the case for assessment. Finally, there is no greater requirement than to understand that the demands of today necessitate that educational policy be the product of a political policy brought about by an accommodation of conflicting public interests as opposed to the narrower consensual goals of the professionals. In short, what is probably required is professional responsiveness as well as responsibility; the resolution of conflict rather than consensus building; and the politics of the market-place rather than those of the priesthood. In the last analysis, it the state vocational educational planners cannot anticipate these changes when they emerge, and then adapt the structure, effort, and thrust accordingly, one must conclude that they will be less than effective and more than responsible for failing to make the maximum policy impact.

Biographical data for B. Dean Bowles:
Ph.D. from Claremont Graduate School in Government and Educational Administration; Staff advisor and Special Consultant on Educational Policy, California Legislature, 1965-1968; Fullbright Grantee to Finland, 1961-1962; Author of articles relative to politics and education and is currently completing a book on state politics of education; Director of a research project on state politics in vocational education in Wisconsin; Currently teaching courses in politics of education at the University of Wisconsin.

Congressional and Legislative Liaison

ARTHUR M. LEE

Chairman Legislative Information Committee
American Vocational Education Research Association
Director, Research Coordinating Unit
Phoenix, Arizona

By way of a preface to my comments I would like to observe that political activity is often looked at with suspicion when it involves public agencies. This is a curious phenomenon of American government, rarely experienced in any other country. It seems to be a by-product of our political past, but this attitude would have been incomprehensible to our American ancestors before the 1870's and 1880's. It is curiously incongruous with both the ideals and operating principles of self-government. In fact, democracy is impossible without political activity in public agencies and during the first century of the nation's development this was a widely recognized adjunct of American government. Now we call it Congressional and Legislative liaison to give it a cloak of respectability, because that is really what we are talking about here today.

I would like to ask your indulgence for a moment, if I may, to present the other side of this kind of politics, or to use another word equally distasteful--lobbying. Some of those who engage in it are scoundrels, but most of them are respectable and respected citizens of the states and nation. Those who do it well perform an indispensable service to representative government. They provide the great volume of facts and opinion upon which virtually every law is based. They give the members of State Legislatures and Congress the information without which these bodies could not do their work. Lobbyists get most of their negative image from the crude methods sometimes employed, and a popular mythology seems to exist that lobbying is therefore a threat to good government.

But lobbying is also objected to because it gives only one-sided information. Lobbyists in the popular mythology are engaged in advancing their own selfish interests, not the public interest. There is a certain naivete here in the apparent assumption that private interests always cancel out public interests and that Congressmen and Legislators can't tell the difference. The same naivete is evident in the assumption that members of the Legislature or Congress can act more judiciously on public legislation if they are shielded from the experts in any subject who are paid to know what they are talking about. The plain truth is that the working nucleus in each Legislative body gets its information for enacting laws primarily from individuals who have strong personal interests because these are the people who have the facts.

So much for my own personal editorial; now let's look at Congressional and Legislative liaison in master planning. We should have no difficulty in seeing the connection between vocational-technical education planning and the implementation of these plans through Legislative and Congressional support if we accept the facts of American politics rather than the myth. Let me, therefore, suggest several premises which, if we do accept them, may be considered as guidelines or basic principles in this discussion. Here they are:

1. The administrative agencies for Vocational Education--State Departments and the U. S. Office of Education--are responsible to the public both directly and through the public's elected representatives. They are responsible for a) carrying out policy and programs fixed by law; b) the economical and efficient use of public funds; and c) reporting the results honestly, accurately, and fully. We could include others but these will do for a start.

2. Congress and the State Legislatures need all of the information they can get, and they need it from practitioners in preference to theorists and amateurs.

3. There are no better qualified individuals to give Congress and the Legislatures the information they need about vocational education than the State Departments of Vocational Education and--hopefully--the Bureau of Vocational Education in the U. S. Office. We are not assuming that these are the only reliable sources of information but that in most cases they are the best. We are making no claim to objectivity by these sources either, but we do assume integrity and reliability.

4. The Legislative process is inevitably one of compromise. In the vernacular it is called horse-trading, wheeling and dealing, and many other things, and in the popular mythology of American politics again it is often considered dishonorable. In plain language it is called give and take.

But whatever you call it, it is inescapable. The reason is simple: no program or appropriation affecting the public interest ever stands alone. Each major cause is always related to several others. Some are inevitably opposed, some allied, and many a little of both. The fine art of politics--the great creative work by master craftsmen from Pericles down to Sam Rayburn and Senator Dirksen--has been to weave these relationships together in acceptable patterns, in discovering alliances not readily apparent, in combining alliances and isolating opposition. One of the great classics in this art, of course, is the American Constitution, but the process goes on year after year in every State Legislature and both Houses of Congress with varying degrees of success.

5. It is better to give the Legislature and Congress too much information than too little. Information withheld by administrators to conceal defects in their programs is a violation of their responsibility to the public and to the public's elected representatives. A pattern of secrecy in which reports are available but are not found in general circulation creates suspicion. What most of those who pursue this approach to public relations do not seem to realize is that it puts not only their integrity under a cloud but their competence as well. Reports which contain only bare bones or those with volumes of meaningless verbiage may be viewed merely as attempts to conceal ignorance and lack of reliable information. This of course is evident to any experienced Legislator if not to the public. The worst thing about it is that it often creates distrust of the entire administrative agency and all of the good work the agency may actually be doing.

6. Information does reach Congress and the Legislatures from many sources, including sub-levels in the U. S. Office and the State Departments of Vocational Education, regardless of administrative regulations to the contrary. Any administrator who does not realize this is simply naive or overly impressed with his own authority. If you accept this assumption--which you are perfectly free not to--then it would seem to follow that administrators' liaison efforts should be directed toward coordinating such channels and keeping them open to public review and inspection rather than trying to suppress or control them.

So much for the assumptions. If you accept them, here are the conclusions that follow:

1. Numerous information channels are and should be open between members of Congress and Legislators on the one hand and the U. S. Office and State Department administrators on the other. This simply means we have competition in getting our message across and we might as well know it.

2. Call it lobbying or call it public relations or call it simply liaison, it is an obligation not an offense. There are no statutory provisions against it, and it should be encouraged rather than discouraged or restricted. There may be a fine line of propriety between the use of public funds to promote public expenditures and giving information to Legislative bodies while on the public payroll, but I think it would take the wisdom of Solomon to know where that line is.

3. Individual Congressmen and State Legislators who appear to resent this kind of activity are in fact neglecting their own obligations to their constituents to be fully informed about the public's business. Actually they sometimes get annoyed with us if they are in disagreement with our purpose in the first place, but more often their resentment is at our methods, not our intent. You usually antagonize only those who are already against you; you encourage those who are for you; and you might persuade those who haven't made up their minds.

4. The more information that flows between administrators and Members of Congress and the Legislature, the more stable and constant will be the Legislative support of any program, and therefore the reliability of master planning.

5. It pays to know as much about related programs as about our own, and for several reasons: it helps to know the context within which our wishes and our concerns are going to appear to the Legislators; we can anticipate comparative strengths and weaknesses in our position and make a better presentation; we can form alliances in advance and strengthen our position; and we can even appreciate a little better sometimes just what the poor Legislator is up against in trying to help us.

These are a few of the conclusions that can be drawn and there are others we could get into if time permitted. But now let's bring all of this down to the level of practical applications. Here are my suggestions based on experience at both the asking the receiving ends of the process.

1. Give Congressmen and State Legislators absolutely reliable, documented, factual information to back up your opinions and recommendations. Anything less exposes you to distrust and disregard of your wishes regardless of how valid your views might be in themselves.

2. Don't give information only to one side. This is a service and a responsibility to the public, not to a political party or a particular group of friends. Vocational education should never be a political or partisan issue.

3. Use tact and candor in your relations with each member of Congress and the Legislature. These people all have their individual characteristics, and effective liaison with them has to be different with each one. Here of course is one of the real challenges in this kind of activity--how to know when to be formal and when to be personal; who you can call off the floor of the House when you have something to talk about and who you can't; how to phrase your letters in each case; when to take up a man's time and when not to; etc. Of course the old rules of public relations all apply; know something about the person you are talking to and his interests; compliment him when you can; be sincere; and keep the channels open.

4. Try to be helpful rather than always on the receiving end in your relations with each person. Look at your needs for Legislative consideration from the position of the Congressman or Legislator. Try to see the problem he is faced with in supporting your program and help him find solutions and compromises. And give him any other help you can on his own problems when he needs it. Make this relationship a real two-way street. One of the best services you can perform is to write speeches and statements for him. You can sometimes actually help draft the legislation you are interested in if you establish this kind of a relationship.

5. Take the trouble to establish personal contacts with as many Members of Congress and the Legislature as you can, especially key people like committee chairmen, ranking majority and minority members, and the leadership. Get on a first name basis with them. First name relationships are their stock in trade as politicians. Make appointments to see them regularly. Call them on the phone occasionally. And write to them as often as possible. Make friends with them in such a way that you both enjoy the contact.

6. Learn to know the professional staff as well as members of Legislative bodies. Keep these persons as completely informed as you do the men and women they work for. They are the experts who actually write Legislative bills, who do the research, and who influence the Legislative process governing state and national policy more than any other single group.

7. Get at least a working knowledge of the Legislative process. This is essential if you're going to be effective. Representatives are tolerant of the ignorance many people display about what they have to do to get a bill through, but they are not impressed by those who show such ignorance. They also appreciate your being able to anticipate exactly what they can do and what they can't do, and when it can be done and when it can't be done. The best way to learn is to ask them questions. Most representatives are flattered to have constituents take an interest in the Legislative process and to be able to explain its fine points. After all this is their field of expertise and they like to display their knowledge as well as anyone else.

8. Learn the power structure. It is different in each Legislative body and it changes with time. There are certain people who exercise the decision-making powers; the others only influence them. This need not be a shock to anyone who has always assumed that Congress and our Legislatures are purely democratic organizations. This is the way governing bodies have always had to work.

   Ordinarily it is best not to try to deal directly with the power structure. Those who make it up are experts on who wants what and why, and it's difficult if not impossible to carry much weight with them. The ordinary efforts such as letters, persuasion, and other outside contacts have little effect. They have their own ball game, and you are not likely to be a part of it. Your friends in the Legislature or in Congress are, however. These are the people who can deal with the power structure. And the higher up you go on the influence scale and who your friends are, the better off you are.

   The one exception to this is when someone in the power structure comes from your state, or is a close friend of yours, or you have some pre-established personal relationship. Then you can sometimes affect important decisions directly. But don't forget, their job covers all legislation and all groups, and you have to allow them the flexibility which that kind of responsibility requires.

9. Don't expect everything you ask for, and don't hold it against your friends in the Legislature or Congress if they don't always deliver. Don't let disappointments impair your efforts to keep friends in the Legislature or in Congress. Remember, their work is highly complex and the results almost always involve compromise and horse-trading. Just satisfy yourself that they do the best they can for you. Then if it isn't good enough get some more friends, but don't lose those you already have. If they don't help you one time, sometimes they feel a special obligation to do so the next time.

10. When there is any important bill going through Congress or the Legislature, count the vote early and keep on counting it right down to the wire. By this I mean know who is for it, who is against it, and who may be on the fence. It saves a lot of wasted effort and it helps to concentrate your resources when they are needed most. A good rule of thumb is to work closely with those who are definitely with you, encourage those who are leaning in your direction, try to persuade those who are on the fence, and forget about the rest. The trick is to know who any of these groups are. Counting the vote is not easy, but you're spinning your wheels if you don't.

11. Finally, back up your position with support from home. This means simply to get as many of the member's own constituents as you can to help you. Letters are extremely important. Telegrams are better yet. Personal conferences are best of all.

Now for a word or two about Congressional and Legislative liaison in master planning, which is what we are really talking about here today. I have discussed liaison and pretty much left it up to you to tie it in with master planning. But there are a few observations that I think should be made.

The first is the most obvious: master planning would be an exercise in futility without close liaison with Congress and the Legislatures. They may say to us, "you're the experts, you tell us where you are going and if we like what we see we will provide the legal and financial resources you need to get there." Or they may look on us with some suspicion as a professional group with our own axes to grind. But in either case, they do provide the resources and any master planning we do must go across their desks--not once, but every year and with every important new development.

Secondly, the very existence of the Legislative authority is going to keep master planning from becoming too rigid. We can never know for sure that our plans will be supported. Changes often have to be made, dictated by political expediency in Congress or the Legislature, which we don't think should be made. It is unsettling to the planners, and at times extremely frustrating. But this gets back to the point made earlier: the better the liaison, the less frustration and more stability there will be.

Third, if master planning is really going to be effective and not merely a paper project to satisfy the legal requirements of the Amendments of 1968, liaison with the Legislation and Congress must be a two-way street. I mentioned this earlier, but it can't be overemphasized. Too often we are merely concerned with influencing the Legislative process. We must also be influenced by it, and sometimes directed by it. Master planning needs the counseling each year of key members of Congress and the Legislature to avoid moving too fast or too slow or starting down the wrong streets. Elected representatives have their ears to the ground and their fingers on the public pulse; they read the signs and interpret the moods of the public much better then we do. If they don't they lose their jobs. Input from them may sometimes be distasteful, as in a year when public opinion simply is not going to stand for an increased budget. But it is better than planning in ignorance or self-delusion.

Finally and above all, I have seen too much dishonesty both in liaison with Congress and in public planning not to repeat this one note of caution: keep both activities out in the open, above board, and in full public view. It is unfortunate that many people look on Legislative liaison as lobbying, using a connotation of that word that brings up images of smoke-filled rooms, secret deals, and influence peddling. These kinds of lobbying activities do go on, more at some times than at other times, and they are more prevalent in some Legislatures than others. But they rarely do any good when employed for legitimate programs. I am inclined to think they do a great deal more damage in the end to the public interest than whatever short-term gains they may appear to achieve. Most of the work that legitimate organizations have with Congress and the Legislature is not carried on this way.

Long-range planning itself is vulnerable to a different kind of dishonesty and one which can also seriously impair Legislative liaison. This is to build into the plans personal self-interests, power structures, and private bias and then try to conceal them with adulterated statistics or glossy window dressing. I don't need to elaborate. This sort of thing probably has done more damage to city planning, for example, than any other single obstacle; and our cities are still struggling against overwhelming difficulties in the wake of dishonest planning. If we in vocational education engage in long-range planning with any other objectives than those written into law plus the genuine best interest of the public, and on any other basis than complete honesty, the men and women in Congress and the Legislatures are going to be the first ones to know.

Biographical data for Arthur M. Lee:
Ph. D. in History from Syracuse University; taught history and political science at Syracuse University, University of Kansas City, Grand Canyon College, University of Arizona and University of Maryland; Professor and Head, Department of Social Studies, Grand Canyon College, 1951-1959; Administrative Assistant to Congressman John J. Rhodes (R-Arizona), 1959-1961; Executive Secretary to Governor Paul J. Fannin of Arizona, 1961-1965; since 1965, Director, Arizona Research Coordinating Unit.

SECTION III

Tools and Techniques of the Planning System Process

Project Planning and Control Through PERT

DESMOND L. COOK

Educational Program Management Center
Ohio State University
Columbus, Ohio

The sponsors of the Leadership Training Program in which you are participants have requested that I discuss briefly with you the purpose and nature of a recently developed management system known as PERT which is utilized in planning efforts. Some of you may be familiar with the acronym and know that it refers to Program Evaluation and Review Technique. This management system was developed during the late 1950's by the U. S. Navy in connection with the Fleet Ballistics Weapons System, or as it's more commonly known, The Polaris submarine. My goal will be to describe briefly the characteristics of PERT and to indicate how it might be useful to persons occupying your positions of leadership.

THE PURPOSE OF PERT

In order to properly understand the nature of PERT, it is important to understand that the system was basically designed as a tool or technique to assist in carrying out a specific job or task. The specific task or job involved is that of project management. The need for effective tools and techniques for the management of projects has been highlighted with the rather large amount of federal funds available to carry out a wide variety of educational research in development activities. Let me briefly review the nature of a project and describe briefly the types of tasks that are carried out as one plans a project and puts it into operation. By approaching a description of PERT from this point of view, a more effective understanding of its use as a planning tool might be secured.

While there are many definitions of the concept project, several basic characteristics of such activities can be identified which enable one to categorize projects from nonprojects. First, there is usually an identifiable end product involved which can be many types of things. Examples would be a hardware item, a decision, the development of a process, or a curriculum guide. It is important to understand that this end product be identified so that we can ascertain when it will have been achieved. Second, projects usually involve a mix of people and resources applied to a wide variety of tasks in order to accomplish the end product. Obviously projects vary in their degree of complexity. The recent Apollo project would be categorized as a very complex project while a doctoral dissertation would be visualized as a relatively noncomplex project. Third, because most of the projects present a "once through" effort, they are invariably filled with uncertainty and risk. There is usually no prior experience base by which to guide the effort. Consequently, there is a need to deal with this particular problem of uncertainty which is often associated with projects dealing with educational innovations. Fourth, most projects have a terminal date by which the end product must be delivered. This end date is often set by contracts but may be established by other means. Taken together, these four characteristics help us to identify or separate a project from a nonproject activity.

What is the job faced by a manager in carrying out a project? The basic task can be divided into two major subgroups or systems of tasks. The first is a series of tasks involved with planning the project while the second consists of those tasks involved in what is referred to as controlling the project.

The planning of subsystem involves a series of five definite tasks which, if the project is to be successful, should be carried out in the order described. The first step is that of accomplishing a "project definition." In this step, the objectives of the project are established along with the other necessary performance specifications. Once the objectives are set, a work flow portraying graphically the series of steps necessary to accomplish the several objectives is then developed. Once the work flow is accomplished, efforts are made then to establish estimates of time needed to do each of the tasks in the work flow plus the total project recognizing the presence of uncertainty associated with each task. Having established a time frame for the project, resource requirements are established and definite schedule dates determined for the start and completion of each task and total project. Once these four steps have been developed, the plan as outlined is then translated into financial terms by developing the budget. The combination of objectives, work tasks, scheduled and resource requirements, plus budget formulate a plan for the project. The most common practice is to describe this plan in the form of a narrative referred to as a proposal. A proposal is, therefore, a projected work plan submitted to a funding agency for possible support.

Should the project be funded and thereby implemented into action, the second major task of controlling is carried out. The basic tasks involved in this function involve those of providing progress reports to the project manager to indicate where the project stands with regard to schedules, budget expenditures, and performance achievement as compared to those established in the plan. Based upon what is contained in the reports, problems are identified and corrective actions taken. In this context, problems are defined as deviations from plan and their degree of seriousness can thus be identified. Once a decision is made as to how a particular deviation can be corrected, the plan is adjusted in terms of the proposed new solution.

In order to assist the project manager in carrying out these kinds of tasks, a general category of management systems known as management information systems has been established. The basic function of such systems is to provide management with the necessary time, cost, and performance information that he needs in order to complete the project successfully. Within this general framework of management systems, PERT and Critical Path Method represent specific categories under a more general label titled network-based management systems. Let us take a brief look at the characteristics of such network-based systems.

CHARACTERISTICS OF NETWORK SYSTEMS

The general characteristic of network systems is that they use the system concept of flow graphs as a way of representing the sequence of tasks which have to be accomplished to reach the end product or terminal objective. A simple illustration of the network is shown as Figure 1.

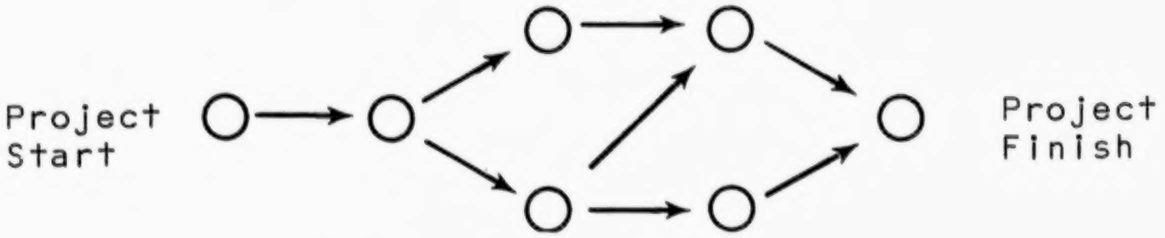


Figure I

The basic building blocks of the network are the arrow lines and circles. The arrow lines are generally referred to as activities and represent time and resource consuming efforts in the project. The circles represent instantaneous points in time and are commonly called events. Events are used to indicate the start and completion of each individual task as well as the total effort. Time, costs, and performance data can be related to these basic building blocks. The flow in the network is always from left to right. There are numerous publications, including one authored by the speaker for the U. S. Office of Education, describing the basic fundamentals of how the system can be employed, provide rules for the construction of the network, and similar operational problems. Time does not permit a detailed discussion of these activities during this presentation. Persons interested in learning more about specific elements of the network systems are encouraged to consult the readings listed at the end.

USE OF PERT IN MASTER PLANNING

Network-based management systems, such as PERT, are primarily used in project situations characterized by the several factors identified earlier in this paper. In general, they are not used or employed for the planning and controlling of routine operations. It has been the author's experience to find that the technique has been condemned because it has often been applied to inappropriate situations.

Let me discuss briefly how PERT and CPM might be related to the general task of a master planning within state departments of education and particularly in the vocational education sector. For this purpose, I shall discuss briefly eight possible applications.

A. The basic concepts of General Systems Theory which underlies the rationale for network systems can be broadened to assist in the development in the master plan itself. Network systems require that the various parts of the project be interrelated and their mutual dependence shown. The same can be said about a master plan. The several parts as well as their interrelationship of it must be clearly shown. Understanding the basic features of PERT can help a planner understand the need to show mutual dependence of the elements within a master plan.

B. Tools and techniques such as PERT can be used to plan and control the development of the master plan itself as well as providing a vehicle for the implementation of the master plan. A plan is only a plan until it is implemented. Once a decision is made to implement a plan, then one must provide a system for making sure the plan is accomplished. Network systems can be useful in insuring the orderly implementation of the master plan. Further, applying a technique such as PERT to the actual development of the plan can be a useful vehicle for gaining experience with the tool.

C. Network techniques can be used in implementing the programs which are established as a result of the decision processes carried on in the PPBS procedure as used in the master plan. Once a decision has been made to implement a given alternative, a network work can be developed to show how the program will be implemented. In one instance, network techniques were utilized to show the steps involved in the installation of a PPBS system in a local school district.

D. Network techniques provide a vehicle for securing the participation and commitment of personnel to work effort. The very nature of network techniques and their use requires that the personnel at the various levels of an effort provide an input to the planning phase as well as to the actual operations phase. Because of their involvement in both efforts such participation usually results in a stronger commitment to carry out the plan successfully than when it is done without the participation of working personnel.

E. Network techniques can provide a means for checking on decision-making by subordinates in actually carrying out a plan. One of the major problems that supervisors and other persons in leadership positions have is developing means of determining the effectiveness of performance on the part of subordinates. Since network techniques involve decisions made by subordinates at lower levels in order to implement the techniques effectively, the impact of such decisions can be studied by persons of leadership positions to see how effectively persons with responsibility can make decisions. Continuous delays in schedule, overspending of the budget, and failure to meet performance specifications because of bad decisions can be used as an objective means of appraisal of personnel performance.

F. Probably the one most advantageous feature of the network systems is that they serve as a forcing function to persons in positions of responsibility to have a continual focus on the accomplishment of goals and objectives. The particular tasks exhibited in the graphic portrayal of the plan or the network, requires that each effort lead to the accomplishment of a goal. One is always forced to ask the question what goal are we trying to accomplish with this work effort? In many cases, careful attention must be given to careful specification of the goal and the relation of smaller goals to larger goals in order that the work efforts may be carried out to maximum effectiveness.

G. Network systems provide a means of encouraging personnel in traditional departmental organizations to work on a program involving the total state department. In most cases, any one project will usually involve personnel from different departments within the organizational structure. Each person or agency is asked to participate in the accomplishment of a specified goal. With this emphasis on the accomplishment of a goal, traditional lines of relationship can be overcome since the focus can be given to the accomplishment of the group effort.

H. Network techniques require that new approaches to the several management functions of planning, organizing, directing, and controlling be developed. This is particularly true of the planning. No one agency or person has the capability of developing fully a master plan. Such an effort will require the utilization of many persons from a wide variety of disciplines. The integration of this variety of specialists on a particular task as represented by a project, along with the desire to use PERT on a project, will require that traditional leadership functions be modified. The organizational and communication problems associated with a wide variety of discipline specialists working jointly to solve a particular task or accomplish a particular goal require a new variety of managers within traditional organizational structures. Network systems can help persons achieve up-to-date skills for carrying out new types of programs and projects which are witnessed daily in most fields of education.

SUMMARY

It has not been possible in even a brief time to give you a detailed description of the nature of PERT. The speaker felt that it was more desirable to indicate the job that was to be done, that of planning and controlling projects, than to describe in detail the tool without indicating the context for its use. One can proceed to describe a tool but without some understanding of why it exists and how it is to be used such descriptions become relatively meaningless. By placing the emphasis upon the context in which PERT is used perhaps any subsequent reading that you might do on the topic or discussions you hear about it, can be made more meaningful and relevant. It has been the author's experience that working with network systems will open a variety of new avenues of thinking and knowledge which become very fruitful in both the overall task of master planning as well as the day-to-day conduct and operations that are required by a person occupying a position of leadership in the field of education in general and vocational education in particular.

REFERENCES

Cook, D. L. *PERT: Applications in Education.* Cooperative Research Monograph No. 17, Office of Education, 1965.

Cook, D. L. *Educational Project Management.* (To be published by Charles F. Merrill Co., Spring 1970).

Archibald, R., and Villoria, R. *Network-Based Management Systems.* John Wiley and Sons, 1967.

Handy, H., and Hussain, K. *Network Analysis for Educational Management.* Prentice-Hall, 1969.

Woodgate, H. S. *Planning by Network.* Revised Edition, Brandon Systems Press, New York, 1967.

Biographical data for Desmond L. Cook:
Ph.D. in Educational Psychology and Measurement from State University of Iowa in 1955; Associate Professor of Psychology, Arkansas State College, 1948-1952; Assistant Director of State University Examinations Service 1952-1956; Associate Professor of Educational Psychology, Purdue University, 1956-1962; Associate Professor and Professor in College of Education, Ohio State University, 1962-; Since 1966 Director, Educational Program Management Center, College of Education, Ohio State University.

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

A BASIC ANNOTATED PERT BIBLIOGRAPHY

Blood, J. W. (Ed.). *PERT: A New Management Planning and Control Technique*. New York, American Management Association, 1962. (Gabriel Stilian and others).

A collection of 15 readings dealing with the relationship between management and PERT, PERT theory, practical experiences with PERT, and PERT variations.

Cook, Desmond L. *An Introduction to PERT*. Occasional Paper 64-156. Columbus, Ohio, The Bureau of Educational Research and Service, The Ohio State University, 1964.

An elementary discussion of the principles of PERT with particular reference to its use in educational research and development projects.

Dean, K. L. *Fundamentals of Network Planning and Analysis*. St. Paul, Minnesota, Military Department, UNIVAC Division of Sperry-Rand Corporation, January 1962. (PX1842B).

A general outline of the principles of network planning underlying both PERT and CPM techniques. Special emphasis is given to the implementing of network techniques for persons unfamiliar with network planning and analysis.

MacCrimmon, K. R., and Ryavec, C. A. *An Analytical Study of the PERT Assumptions*. Memorandum RM-3408-PR. Santa Monica, California, The Rand Corporation, December 1962.

Presents the results of a mathematical analysis of the basic assumptions used in PERT calculations and the direction and magnitude of errors introduced by these assumptions both for individual activities and the total network.

Malcolm, D. G.; Roseboom, H. J.; and Clark, C. E. "Application of a Technique for Research and Development Program Evaluation," *Operations Research*. Vol. 7:646-669, September, October 1959.

One of the first papers to appear on PERT. Describes the development of the model, the initial preliminary

extended application to the POLARIS program. Basic assumptions and limitations are presented.

Miller, Robert W. *Schedule, Cost, and Profit Control with PERT*. McGraw-Hill Book Company, New York, 1963.

A comprehensive presentation of the origins of PERT; the problems and procedures involved in implementation; the relation of PERT to project definition, systems engineering, and configuration management; and the relation of PERT to management systems. Good discussion of network principles and construction.

Murray, John E. "Consideration of PERT Assumptions," *IEEE Transactions of the Professional Technical Group on Engineering Management*. Vol. EM 10 Number 3, September 1963.

Analysis of the original PERT statistical assumptions in view of experience gained with the technique. Cites reasons for the establishment of original assumptions and suggests modifications designed to improve the statistical basis.

Phillips, C. R. *Computer Programs for PERT and CPM*. 2nd ed. rev. Technical Paper No. 13. Silver Springs, Maryland, Operations Research, Inc., October 1963.

Discusses the features of the various computer programs developed for both CPM and PERT. Provides a listing and brief description of programs along with type of machine, resource to contact, etc.

PERT Fundamentals. Washington, D. C., PERT Orientation and Training Center, Bolling Air Force Base, 1964.

A three volume series in programmed instruction format covering the networking (volume 1), scheduling and planning (volume 2), and workbook plus final examination (volume 3).

PERT . . . Guide for Management Use. Washington, D. C., PERT coordinating Group, Office of the Secretary of Defense.

Description of PERT fundamentals so as to provide for a common means of communication between military, industrial, and governmental users of the technique.

PERT, Program Evaluation Research Task. Summary Report, Phase I. Washington, D. C., Special Projects Office, Bureau of Naval Weapons, Department of the Navy, July 1958.

Presents the first phase of the original development of PERT and its theoretical potential for management as

developed by the project team of Navy Special Projects Office, Booz, Allen, and Hamilton, and Lockheed Missile Systems Division.

Planning, Programming and Budgeting Systems

JOSEPH F. MALINSKI

Program Development Section
Vocational-Technical Education
Minnesota Department of Education
Saint Paul, Minnesota

The purpose of this paper is to present some ideas relating to the development of a Planning Programming and Budgeting System for Vocational-Technical Education. The application of this technique (or probably more appropriately, these techniques) to vocational-technical education is evolving and there will be many modifications and adjustments made before a format emerges that will be in general use. Some of the ideas presented are my personal conception of a Planning Programming and Budgeting System and should be treated as such. These ideas are a synthesis of procedures used in corporate management, farm management, and the study of and attempted application of Planning Programming and Budgeting techniques in vocational-technical education.

All of you, I am sure, have given considerable thought and attention to the relationship between the State Department of Education personnel and the local educational agencies as this relationship currently exists, and also to what the relationship is likely to be when a Planning Programming and Budgeting System is operational. The following is an outline of the paper.

I. The Role and Function of the State Division of Vocational-Technical Education

II. Definition of Planning Programming and Budgeting System

III. Planning (Management Information)

IV. Programming (Management Decision Making)

V. Budgeting (Management Decision Making)

VI. Evaluation (Management Analysis)

VII. The Implications of the Installation of the Planning Programming and Budgeting System for Vocational-Technical Education

THE ROLE AND FUNCTION OF THE STATE DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

Any discussion of the role and function of state level activities in Planning Programming and Budgeting must be prefaced by a brief review of past activities, the current situation, and projection into the future. From 1917 to 1963 vocational-technical education operated under the categorical format of the Smith-Hughes and George Barden Acts. This resulted in the formation of administrative and curricular structures to utilize this categorical support. These funds were always limited; and as a result, rigid criteria for qualification were established. Administrative efficiency was the watch word under this system; and because discretionary powers were limited or nonexistent, the lowest level administrator supported by a book of rules and regulations was able to manage the distribution of the categorical funds. These procedures were not caused by the people administering the program, but rather were a result of the legislation plus the general practice of line item budgeting and accounting.

The Vocational Education Act of 1963 began the process of modification by asking us to identify the expenditure of funds by the levels of vocational-technical education. This Act, however, retained the categorical definitions and added some new categories.

With the passage of the 1968 Amendments, Congress removed all reference to subject matter categories and in their place installed the requirement of local and state planning on an annual and projected basis. This requirement for planning recognizes the rapid acceleration in the rate of change in technology and the commitment to make education universal. This Act then mandates the change in role of the State Department of Education from that of technical assistance and distribution of dedicated funds to one of recommending allocations of resources based on the interpretation of economic and demographic data.

One caution must be voiced when we consider long-range projections. First, projections are not predictions of the future. Any projection of a demographic or economic variable must be based on past events or trends. A simple method is a "straight line" projection. Mathematical functions--simple or involved--are more complex and can be applied to historical data and utilized to obtain future estimates. In a few instances the effect of known or planned changes in policies or in related variables can be brought to bear on the problems. More often, the estimator will consider judgments about probable future change, based on specialized knowledge in his discipline and more general knowledge about many specific changes which will have an impact on the statistical under analysis and projection.

Second, one of the real purposes of projection of data, such as population, is to be wrong, when the projection date is reached. Wrong, that is, in the sense that the implications of the projection, when made, set in motion research, analysis, and resultant changes in policy that will purposely alter the factors originally assumed.

At home, the 1969 Legislature has directed that a number of state agencies, the State Department of Education among them, prepare a program budget for the 1971-73 biennium as a companion to the traditional line-item budget. As I visit with people from all over the United States, I find that nearly all states are at some level of development toward a Planning Programming and Budgeting System. Some of you, no doubt, are very much involved with the operational aspects of the system, while others are just beginning the initial planning for its installation or development.

DEFINITION OF PLANNING PROGRAMMING AND BUDGETING SYSTEM

By definition, a Planning Programming and Budgeting System is a complex program-based budgeting system which emphasizes planning, program development, and budgeting as part of a unified process.

This system places emphasis on the comparisons of costs and benefits between various programs. These comparisons rely heavily on mathematical statistical techniques for program and budget analysis and emphasize the search for alternative approaches in meeting public needs and problems. This system involves the packaging of techniques and disciplines which in the past were often used independently of one another.

Planning Programming and Budgeting emphasizes integration of long-range planning, program development, budgeting, and research in such a way as to promote a long-range highly analytic approach to the allocation of vocational-technical resources. It assists in making budget decisions in context with long-range plans and needs. It requires that both budgeting and planning will be fully supported by research and statistical analysis and provides that plans will be modified as necessary to reflect changing trends, available resources, and the impact of earlier budgetary systems. There is an emphasis on the use of statistical and economics techniques in the analysis of programs and allocation of fiscal resources.

MODELING

(Using a formula or outline which can be manipulated to show probable impact of the various alternatives). For example, in order to get a look at the resource needs for the state programs under Part B, a statistical and financial analysis was made on an annual basis from 1964-65 to 1973-74. Three of the years are shown on the following table. This analysis projects current practice and from this base alternatives can be considered:

Program/Purpose	1965-66	1969-70	1974-75
Part B State Programs			
Secondary			
Total Enrollment Gr. 9-12	242,684	277,356	327,324
Total Vocational Enrollment	29,339	42,750	61,230
Percent Served	12.1	15.4	18.7
Total Cost	$3,313,667	$ 6,378,700	$12,400,000
Cost Per Student	$ 112.94	$ 149.21	$ 202.98
Post Secondary			
Total Enrollment	5,547	15,500	25,500
Percent Served 18-21	2.6	5.7	8.6
Total Cost	$4,282,284	$18,274,500	$40,672,500
Cost Per Student	$ 772.00	$ 1,179.00	$ 1,595.00
Total Non-Resident Aid	$1,541,101	$ 7,858,035	$17,489,175
Adult			
Labor Force	N.A.	1,539,600	1,607,660
Work Force	1,480,700	N.A.	N.A.
Total Enrollment	48,441	81,500	118,000
Percent Served	3.27	5.29	7.34
Total Cost	$1,017,483	$ 2,150,000	$ 4,230,000
Cost Per Student	$ 21.00	$ 26.35	$ 35.85

MARGINAL ANALYSIS

(Comparisons of Returns for Additional Dollars Invested). Special educational programs and services designed to serve disadvantaged or handicapped persons to achieve vocational education objectives can be used to illustrate marginal analysis.

This chart shows two of five pages of projections of levels of program services to disadvantaged and handicapped students, assuming success at various resource levels:

PART A

	Actual			Projected				
	1966-67	1967-68	1968-69	1970	1971	1972	1973	1974
TOTAL ENROLLMENT (9-12)	248,795	258,077	269,183	277,356	286,024	306,814	317,761	327,324
TARGET POPULATION								
In numbers	24,880	25,808	26,918	27,736	28,602	30,681	31,776	32,732
In percent of total	10%	10%	10%	10%	10%	10%	10%	10%
COST								
COST PER STUDENT								

STUDENTS SERVED BY FUNCTION

% of funds Allocated to function	Description of function	1966-67	1967-68	1968-69
	Enrolled in Regular Programs	2,174	4,917	5,886
100%	Enrolled in Special Programs	1,191	1,430	913
	Receiving Special Services in Regular Programs	0	0	0

PART B-1

PROJECTION OF HANDICAPPED STUDENTS TO BE SERVED WITH FEDERAL AUTHORIZATION MATCHED AT A 90/10 RATIO

		1970	1971	1972	1973	1974
75%	Enrolled in Special Programs	1,767	2,607	2,866	2,674	2,479
25%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	3,452	5,494	6,562	6,562	6,562
	$100 per student	1,726	2,747	3,281	3,281	3,281
	$150 per student	1,151	1,831	2,187	2,187	2,187
70%	Enrolled in Special Programs	1,649	2,434	2,694	2,497	2,314
30%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	4,142	6,592	7,874	7,874	7,874
	$100 per student	2,071	3,296	3,937	3,937	3,937
	$150 per student	1,447	2,197	2,624	2,624	2,624
65%	Enrolled in Special Programs	1,531	2,260	2,501	2,318	2,149
35%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	4,832	7,690	9,186	9,186	9,186
	$100 per student	2,416	3,845	4,593	4,593	4,593
	$150 per student	1,611	2,563	3,062	3,062	3,062

PART A

	Actual			Projected				
	1966-67	1967-68	1968-69	1970	1971	1972	1973	1974
TOTAL ENROLLMENT (9-12)	248,795	258,077	269,183	277,356	286,024	306,814	317,761	327,324
TARGET POPULATION								
In numbers	74,640	77,424	80,754	83,208	85,806	92,043	95,328	98,196
In percent of total	30%	30%	30%	30%	30%	30%	30%	30%
COST								
COST PER STUDENT								

STUDENTS SERVED BY FUNCTION

% of funds Allocated to function	Description of function	1966-67	1967-68	1968-69
100%	Enrolled in Regular Programs	2,174	4,917	5,886
	Enrolled in Special Programs	1,191	1,430	913
	Receiving Special Services in Regular Programs	0	0	0

PART B-I

PROJECTION OF DISADVANTAGED STUDENTS TO BE SERVED WITH FEDERAL AUTHORIZATION MATCHED AT A 90/10 RATIO

		1970	1971	1972	1973	1974
75%	Enrolled in Special Programs	2,650	3,911	4,330	4,012	3,719
25%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	5,178	8,240	9,844	9,844	9,844
	$100 per student	2,589	4,120	4,922	4,922	4,922
	$150 per student	1,726	2,746	3,281	3,281	3,281
70%	Enrolled in Special Programs	2,473	3,650	4,041	3,745	3,471
30%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	6,212	9,888	11,812	11,812	11,812
	$100 per student	3,106	4,944	5,906	5,906	5,906
	$150 per student	2,070	3,329	3,937	3,937	3,937
65%	Enrolled in Special Programs	2,297	3,390	3,753	3,477	3,223
35%	Receiving Special Services in Regular Programs At:					
	$ 50 per student	7,248	10,536	13,780	13,780	13,780
	$100 per student	3,624	5,768	6,890	6,890	6,890
	$150 per student	2,416	3,845	4,593	4,593	4,593

MISSED OPPORTUNITY COSTS

(What opportunities for uses of vocational-technical education funds are being given up as a result of a decision to invest funds in one area rather than another?) A simple illustration of this might be shown as follows. Assuming the cost of training a technician in a two-year post-secondary program is $2,358, the cost of training 45 technicians would be $106,110. A combination program using secondary, post-secondary, and adult training with:

1. Five technicians who have had pre-technical training in high school plus one year of post-secondary preparation,
2. Fifteen technicians with two years of post-secondary training, and
3. Twenty-four technicians who have had no preparatory training but have had five years of supplementary training while working

would give an output of the same 45 technicians as shown below.

	Current Enrollment	Year End Employment	2nd Year Level Output	Cost
Secondary	50	30	5	$ 6,641.05
Post Secondary	20	5	15	$35,370.00
Adult (Supplementary) (Upgrading)	125	--	25	$ 3,293.75
			45	$45,835.35

The decision to provide technician training only through the post-secondary program would utilize $60,275 more than would be used if the second alternative was used.

COST BENEFIT, COST EFFECTIVE ANALYSIS

Cost benefit analysis is the most publicized and probably the most difficult to apply to educational programs. The immediate application of complex analytical techniques to the decision making problems in vocational education would be, in my opinion, a very serious mistake. The decisions and the data relating to them must stand the test of reliability, relevance, and reasonableness. The application of theoretical models or other complex technicians should not be applied when simple addition, subtraction, and division is all that is needed to give the required answer at this point in time. In other words, as we install the system it is more important to be generally correct than specifically wrong.

Let us, then, look at each of the parts of the system in a little more detail.

PLANNING

The planning process involves the continuing review of the objectives and planned accomplishments established for each program, the analyses of possible alternative objectives and of alternative programs for meeting these objectives.

The activities involved in the planning process can be grouped under two major classifications: Analysis and Decision Making. Planning activities in a Planning Programming and Budgeting System cannot exist independently. It is a sub system within the management function at the state level. The following outline lists in sequential order the process of planning:

PLANNING

A. Analysis

  1. Analysis of labor market needs
  2. Anaylsis of population to be served
  3. Current program inventory

B. Decision-Making

  1. Establishing long-range objectives
  2. Determine alternative ways of achieving objectives
  3. Determine resources needed for each alternative
  4. Selection from among alternatives

PROGRAMMING

Programming is the process of combining into program categories the activities of various organizational units which have the same functional objectives. This process of programming requires the construction of a program structure. What is the purpose or function of the program structure? As I see it, it provides a means of displaying the problem areas of any program. In other words, a program structure is the result of top management decisions rather than a means of arriving at such decisions. Its development is the result of negotiations, discussion, study, and intuitive judgment of the executive staff. This means it is more than the mere cutting up of the line-item budget into different pieces. It need not follow either staff or school organizational patterns.

True, the capability to construct an object of expenditure budget must be built into the accounting structure (because that's how the money is spent). But the program structure for any budget cycle must display the functions of education with particular emphasis on the most pressing problems. Therefore, it must not be thought of as "carved in stone." As needs change, a third level activity could be raised to the level of a sub-program and major program area might be reduced to an element.

PROGRAM STRUCTURES OF VOCATIONAL-TECHNICAL EDUCATION

Basic Vocational Skills
Exploration
Skill Development
Job Proficiency Training
Updating
Upgrading
Retraining

Secondary
Post-Secondary
Adult
Disadvantaged
Handicapped
Research and Training
Exemplary
Residential
Consumer and Homemaking
Part G coop
Work Study

01. Agriculture
04. Distributive
07. Health
09. Home Economics
14. Business & Office
16. Technical
17. Trade & Industry
Public Service
Group Guidance
Other

BUDGETING

Program budgeting is a system in which fiscal information is grouped within program categories and is related directly to accomplishment of a goal or objective. It emphasizes ends rather than means. Referring to the program structures shown above expenditures of funds for basic vocational skills might appear in any one of the levels. Elements of the subject matter areas might also contain basic vocational skill components.

EVALUATION (MANAGEMENT ANALYSIS)

I choose to call this function of the Planning Programming and Budgeting System "management analysis" or, in the terms we are talking today, as analysis of the function of educational management. Here, as I see it, is the point where the State Educational Agency in its totality must carefully review laws, rules, regulations, and procedures that affect the ability of a local school to choose from among alternative means of achieving vocational-technical education objectives. Inasmuch as the responsibility for the educational process under the Planning Programming and Budgeting System will rest with the local district, the decisions concerned with these processes must be under their control.

I would like to show you a chart that I feel describes this. Various sources of support for education at either the state or local level are available, and they seem to be increasing. Local educational management has the responsibility for allocating them among the various programs. I have indicated the uniform accounting codes and a reference to Handbook VI.

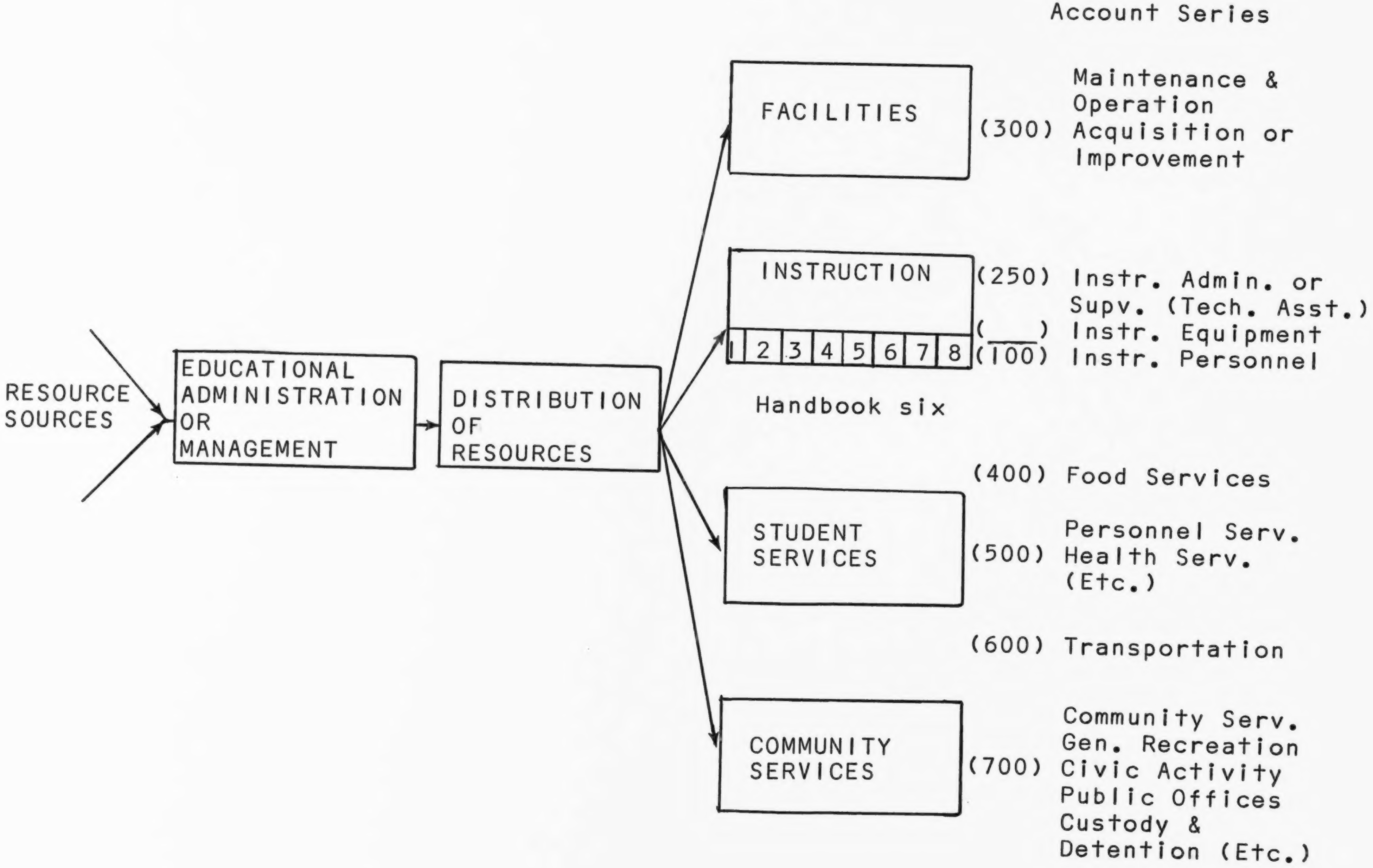
Next, let us take a look at the mirror image of the management resource flow chart. These resources as I see them are not only money. Therefore, management analysis system for education must contain both statistical and financial data elements. These data must be so aggregated that they reflect the degree of progress made toward obtaining an objective. If we are to analyze the efficiency and effectiveness of educational management, we must be able to separate out the costs and functions and results separately from the other functions of the educational system. As I have illustrated here, the analysis instruments must be so constructed that they will provide for analysis of each of the areas shown. Let us look at the Instruction Section. As an illustration of the analysis of utilization of resources a form such as the Instructional Program Analysis shown below could be used for any vocational instructional program. We might have to modify some of the inputs, and certainly we would have to vary the output measures; but the format could be used for any program. This type of analysis gives the person responsible for the instructional program a view of the performance of the program as well as a comparison with the average of all similar programs in the state. It also provides information to him as to the location of his program in the range as demonstrated between relationship of the program to the 20 percent high or the 20 percent low.

An advantage of such an analysis, as I see it, is that after looking at the output measures, the persons responsible for the program will look for the critical input variables, or to say it in another way, he will look for that input which if modified will result in the greatest progress toward increasing the efficiency and effectiveness of the program.

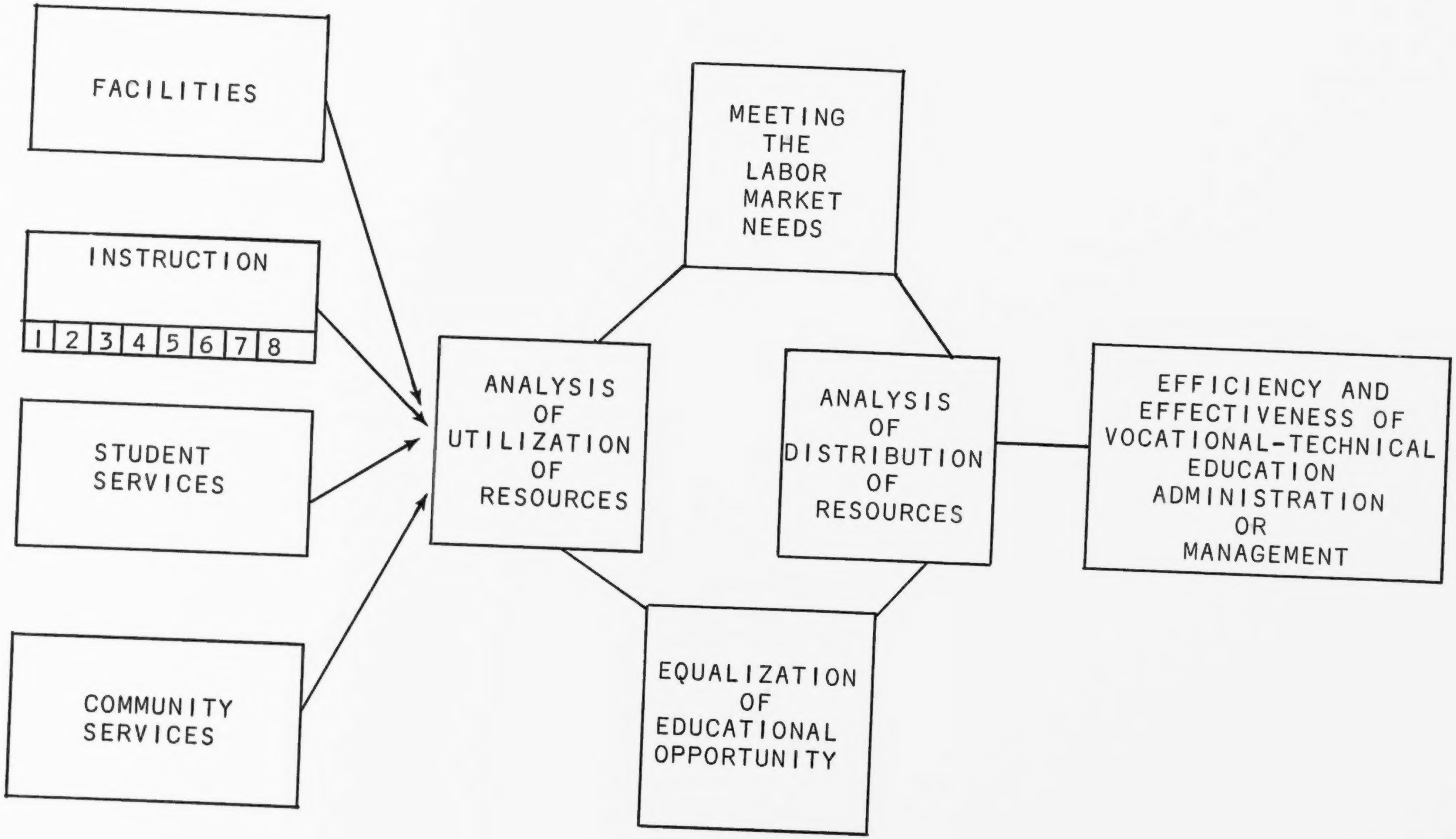
THE IMPLICATIONS OF THE INSTALLATION OF THE PLANNING PROGRAMMING AND BUDGETING SYSTEM FOR VOCATIONAL-TECHNICAL EDUCATION

The effectiveness of a Planning Programming and Budgeting System will depend heavily on the staff arrangements made to carry it out:

EDUCATION RESOURCE MANAGEMENT FLOW CHART


Account Series
RESOURCE SOURCES
EDUCATIONAL ADMINISTRATION OR MANAGEMENT
DISTRIBUTION OF RESOURCES
FACILITIES
(300) Maintenance & Operation Acquisition or Improvement
INSTRUCTION
1 2 3 4 5 6 7 8
(250) Instr. Admin. or Supv. (Tech. Asst.)
(___) Instr. Equipment
(100) Instr. Personnel
Handbook six
(400) Food Services
STUDENT SERVICES
(500) Personnel Serv. Health Serv. (Etc.)
(600) Transportation
COMMUNITY SERVICES
(700) Community Serv. Gen. Recreation Civic Activity Public Offices Custody & Detention (Etc.)

ANALYSIS OF VOCATIONAL-TECHNICAL EDUCATION MANAGEMENT


FACILITIES
INSTRUCTION
1 2 3 4 5 6 7 8
STUDENT SERVICES
COMMUNITY SERVICES
ANALYSIS OF UTILIZATION OF RESOURCES
MEETING THE LABOR MARKET NEEDS
EQUALIZATION OF EDUCATIONAL OPPORTUNITY
ANALYSIS OF DISTRIBUTION OF RESOURCES
EFFICIENCY AND EFFECTIVENESS OF VOCATIONAL-TECHNICAL EDUCATION ADMINISTRATION OR MANAGEMENT

1. The entire operation must be the personal responsibility of the executive head of the organization. In the case of vocational-technical education, that responsibility is yours. No one at a lower level has the authority or the right to acquire the knowledge required to perform the necessary tasks of coordination. As head of the Program Planning and Development Section within the Division of Vocational-Technical Education, I have no authority except through Mr. Van Tries, our Assistant Commissioner. It is my feeling that my staff and I perform the functions of technical assistance to management. We are not decision makers, even though at times we are accused of making decisions when our analysis of a situation recommends one alternative.

2. Planning, programming, budgeting, and review, or as I have chosen to call it in this paper--management analysis, are separate but highly inter-related operations. Programming is concerned with policy, objectives, long-range projections, and analytical methods that go far beyond traditional budgetary procedures. Programming will remain merely an academic exercise unless it is implemented through the budget, which can provide an essential link between policy and administration.

3. Finally, Planning Programming and Budgeting depends on the information that can only be obtained through the reporting of past performance, both statistical and financial. It requires the development and use of analytical skills that go far beyond the object of expenditure budgeting and accounting.

It is beyond our capability today to attempt to find sources to the myriad of problems that, if not currently apparent, will arise with the installation of a Planning Programming and Budgeting System in education. Some of the hurdles that must be overcome are as follows:

1. To change the emphasis from the process of education to the results.

2. The construction of a data base that will assist vocational-technical educators in setting objectives.

3. The separation of the management functions from instruction and student service functions.

4. The development of a unified record keeping system (probably mechanized) that will have the responsiveness to assist educational managers in their decision making.

INSTRUCTIONAL PROGRAM ANALYSIS
PROGRAM _N_ YEAR __

INPUTS (COSTS)	THIS PROGRAM	AVERAGE OF ALL PROGRAMS	20% HIGH	20% LOW
Instruction				
Admin. & Supv.				
Equipment				
Supplies				
Teaching				
Curriculum Dev.				
Cost per Student				
Length of Program				
Number of Students Entering				
Other Student Characteristics				
Other Inputs				
Other Inputs				
OUTPUTS (RETURNS)				
Number of Graduates				
Number of Graduates Working				
Other Outputs				
Other Outputs				
Number of Months				
Apprenticeship Credit for Training				
Index of Employment Satisfaction				
Other Outputs				

5. The design of a management analysis document that will measure the efficiency and effectiveness of educational management.

Biographical data for Joseph F. Malinski:
Graduation from the University of Minnesota in 1947; Teacher of Vocational Agriculture until entering the Minnesota State Department of Education in 1950 as supervisor and consultant in Vocational Agriculture; Director of Program Planning and Development, Division of Vocational Technical Education, State Department of Education, Minnesota since 1967; Presenter of papers and consultant in Program, Planning and Budgeting Systems at Ohio State University, Mankato State College and University of Florida.

The Delphi Technique

DONALD P. ANDERSON

Assistant Dean
College of Education
The Ohio State University
Columbus, Ohio

INTRODUCTION

The Delphi Technique was developed by Olaf Helmer and his colleagues at the Rand Corporation in the early 1950's to obtain group opinions about urgent defense problems. About five years ago, an unclassified description of the Technique was published and the procedure is being employed presently in a number of settings including education.

The Technique, which is built on the strength of informed intuitive judgment, is intended to get expert opinion without bringing the experts together in a fact-to-face confrontation. Contact is generally made with the experts through successive questionnaires and feedback with each round of questions being designed to produce more carefully considered group opinions. Pfeiffer presents the following variation of the procedure.[1]

1. The first questionnaire may call for a list of opinions involving experienced judgment, say a list of predictions or recommended activities.

2. On the second round each expert receives a copy of the list, and is asked to rate or evaluate each item by some such criterion as importance, probability of success, and so on.

3. The third questionnaire includes the list and the ratings, indicates the consensus if any, and in effect asks the experts either to revise their opinions or else to specify their reasons for remaining outside the consensus.

---

[1] John Pfeiffer, *New Look at Education*, (Poughkeepsie, New York: Odyssey Press, 1968), pp. 152-157.

4. The fourth questionnaire includes list, ratings, the consensus and minority opinions. It provides a final chance for the revision of opinions.

While the procedure has been used extensively in predicting long-range developments in defense, automation, space research, and other scientific-technological areas, it also can be used to advantage in encouraging convergence of opinion or at least a majority opinion and a clearly defended minority opinion as a basis for formulating goals and setting priorities. The following sections contain portions of instruments which might be used in predicting futures and setting priorities.

PREDICTING FUTURE EVENTS IN EDUCATION

Questionnaire #2 (List of predicted events already generated.)

Development*	Date Event Will Occur (You may respond "Never")
1. Weather and climate control will increase the agricultural production of the State of Jefferson by fifty percent.	
2. The length of the work week for at least half of the blue collar workers in Jefferson will be 25 hours or less.	
3. Ninety-five percent of all children in Jefferson will complete at least fourteen years of schooling.	
4. No one in the State of Jefferson shall be more than 30 miles (45 minutes) from a vocational-technical school offering instruction in at least six engineering technology programs and six business and health related occupation programs.	
5. It will be possible to exercise genetic control or influence over the "basic constitution" of an individual.	
6.	

---

*These examples are very different and normally would not appear on the same questionnaire.

Questionnaire #3

Development	Your Previous Estimate	Consensus Estimate (IQR)	Your New Estimate	Reason Your Estimate is Below or Above IQR
1. Weather and climate control will increase the agricultural production of the State of Jefferson by fifty percent.				

Questionnaire #4*

Development	Your Previous Estimate	Consensus Estimate (IQR)	Your New Estimate	Your Critique of Arguments Unacceptable to You
1. Weather and climate control will increase the agricultural production of the State of Jefferson by fifty percent.				

*When Questionnaire #4 is distributed, a list of the reasons reported on Questionnaire #3 is enclosed. If the new estimate lies outside the IQR (Inter-Quartile range), the expert is asked to give reasons why he challenges those arguments given in favor of an estimate on the opposite side of the IQR from his own. In other words, if his estimate is high, he should refute the low estimates.

SETTING PRIORITIES

Questionnaire #1 (Generating the objectives or target conditions.)

Please provide 6-10 endings to the following sentence:

> "During the decade ahead, the Jefferson State Division of Vocational Education should concentrate its energies and resources on . . ."

Questionnaire #2

After each of the statements, indicate the priority you would attach to the target condition using the following key:

1. Top priority
2. Second priority
3. Maintain at present level
4. Reduce or discontinue activity or service--do not initiate activity in this area.

In order to face up to the reality of scarce resources, you must distribute your priority rankings in such a manner that you will have an equal number of 1's, 2's, 3's, and 4's.

During the decade ahead, the Jefferson State Division of Vocational Education should concentrate its energies and resources on:*

Priority

1. Assisting vocational schools in the assessment of existing and experimental programs.
2. Conducting vocational-technical education needs assessment in the State.
3. Providing in-service opportunities for the State's vocational-technical school teachers.
4. Doubling the number of vocational-technical teaching stations in Jefferson.
5. Improving internal communications (within the Division and within the Jefferson State Department of Education.)

---

*Some of these statements are of a different nature and normally would not appear on the same questionnaire.

6. Providing services, i.e., centralized purchasing and accounting, to the State's vocational-technical schools in order to increase their efficiency.

7.

Questionnaire #3

Accompanying each of the statements (a) are your previous response (b) the consensus response (c) and spaces to record your new response (d) and the reason for the variation between your new response from the consensus response if indeed there is a variation.

During the decade ahead, the Jefferson State Division of Vocational Education should concentrate its energies and resources on:

Statement(a)	Your Previous Response(b)	Consensus Response(c)	Your New Response(d)	Reason for variation between c and d
1. Assisting vocational schools in the assessment of existing and experimental programs.				

Questionnaire #4 (Much the same as #3. Experts are provided a listing of arguments for assigning priorities higher or lower than the group priority ranking.)

BIBLIOGRAPHY

Adelson, Marvin. *The Technology of Forecasting and the Forecasting of Technology.* Systems Development Corporation, SP-3151/000/01, April 25, 1968, 20 pp.

Baier, Kurt and Nicholas Rescher. Values and the Future: *The Impact of Technological Change on American Values.* New York: The Free Press, 1969, 527 pp.

Bell, Daniel (ed.). *Toward the Year 2000. Work in Progress.* New York: Houghton Mifflin, 1968, 400 pp. Originally published by American Academy of Arts and Sciences in Daedalus, Summer 1967.

De Jouvenel, Bertrand. *The Art of Conjecture.* New York: Basic Books, 1967, 307 pp., first published in France, 1964. Translated from the French by Nikita Lary.

Gordon, Theodore J. *The Future.* New York: St. Martin's Press, 1965. 184 pp.

Helmer, Olaf. *Social Technology.* Basic Books, 1966, 108 pp.

Helmer, Olaf. *The Use of the Delphi Technique to Problems of Educational Innovations.* Santa Monica: The RAND Corporation, P-3499, December, 1966.

Hirsch, Werner Z. and Colleagues. *Inventing Education for the Future.* San Francisco: Chandler Publishing Co., 1967, 353 pp.

Kahn, Herman and Anthony J. Wiener, *The Year 2000: A Frame-Work for Speculation on the Next Thirty-Three Years.* New York: Macmillan, 1967, 431 pp.

Lecht, Leonard A. *Goals, Priorities, and Dollars: The Next Decade.* New York: The Free Press, 1966.

Michael, Donald N. *The Unprepared Society.* New York: Basic Books, 1968, 132 pp., $4.95.

Morphet, Edgar, et. al. *Designing Education for the Future.* (There are currently six books in this series.) New York: Citation Press.

JOURNALS

Futures ("The Journal of Forecasting and Planning")

The Futurist ("A Newsletter for Tomorrow's World")

Biographical data for Donald P. Anderson:
Ph.D. in Educational Administration from the University of Minnesota in 1964; Secondary school teacher and high school principal 1953-1962; Associate Director of the University Council for Educational Administration, Ohio State University, 1964-1966; Associate Professor of Educational Administration, Ohio State University, 1966-1968; Assistant Dean, College of Education, Ohio State University since 1968.

SECTION IV

Compilation of Sub-Group Work Session Reports

Identification of the Elements Required for Long-Range Planning

Long-range planning is an essential activity if the benefits of vocational education are to be maximized for the greatest number of individuals. Planning must serve as an administrative tool to assist in the improvement and maintenance of existing programs and in the development of new programs of occupational education for youth and adults.

A state division of vocational education must orchestrate all elements of a long-range plan into effective program development and operation. These elements must be identified for each agency and there development provided for. The purpose of the sub-group work sessions were to identify essential elements required for effective long-range planning which might serve as a guide for state education agencies.

OBJECTIVE OF THE WORK SESSIONS

Projected planning and reporting for state programs of vocational education should ultimately require only that information which is essential in the maintenance and development of occupational education.

Therefore, the objectives of the sub-group work sessions were:

1. To determine the essential elements of long-range plans for state programs of vocational-technical education.
2. To delineate the essential elements of long-range planning and to determine their order of development.

ORGANIZATION OF THE SUB-GROUPS

Participants of the seminar were divided into five groups of approximately 14 members each. Groupings were made on the basis of state population size, i.e., the ten most populous states in Group I, the ten next most populous in Group II etc.

Groups, their membership, chairmen and recorders were:

Group I: John Koenig, New Jersey, Chairman and Richard W. Howes, Connecticut, Recorder
States represented--California, Florida, Illinois, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, Texas

Group II: Robert P. Van Tries, Minnesota, Chairman and Florence Wagner Sutler, New York, Recorder
States represented--Alabama, Washington, D. C., Georgia, Indiana, Minnesota, Missouri, North Carolina, Tennessee, Virginia, Wisconsin

Group III: Francis T. Tuttle, Oklahoma, Chairman and M. G. Hunt, Colorado, Recorder
States represented--Connecticut, Iowa, Kansas, Kentucky, Maryland, Oklahoma, Puerto Rico, South Carolina, Washington, West Virginia

Group IV: E. B. Olson, South Dakota, Chairman and Dale Peters, Missouri, Recorder
States represented--Arizona, Arkansas, Colorado, Maine, Nebraska, Oregon, Rhode Island, South Dakota, Utah

Group V: Neal D. Andrew, New Hampshire, Chairman and Cola D. Watson, Vermont, Recorder
States represented--Guam, Hawaii, Idaho, Montana, Nevada, New Hampshire, North Dakota, Vermont.

SUGGESTED ELEMENTS OF A STATES LONG-RANGE PLAN LISTED CHRONOLOGICALLY IN ORDER OF DEVELOPMENT

1. Demographic analysis of the status and condition of the state
    a. Develop systems for collection of program planning and program reporting data
    b. Determine training needs of target groups

2. Establishment of statewide goals for vocational education
    a. Developed within the framework of the established goals for education totally
    b. Developed in conjunction with other agencies and organizations related to and affected by vocational education
    c. Determine quantifiable objectives and priorities for attainment of goals

3. Formulation of alternative strategies for accomplishment of quantified objectives
    a. Determine gross need for vocational education as relates to needs for inservice and preservice teacher and leadership education
    b. Organize state division of vocational education to accomplish goals as well as provide for planning function
    c. Plan for involvement of groups and individuals in planning and goal attainment including teacher education, state advisory councils, local education agencies, manpower coordinating committees, and others

4. Plan for programs of vocational education
    a. Develop state guidelines for distribution of programs among agencies at a given educational level, i.e., high school or post-secondary, and for allocation of programs between levels
    b. Develop patterns for articulation of curriculums between secondary, post-secondary and adult
    c. Plan for improvement of local program planning based upon use of comparable data collected on a statewide basis
    d. Plan for evaluation and follow-up of vocational education programs

5. Development of budgets and financial planning for attainment of goals through projected programs and projects
    a. Providing for legislative authorization and appropriation of funds
    b. Development of policies for the administration and disbursement of state funds
    c. Provision for development of local funding and support.

SUGGESTIONS FOR FUTURE ACTION

The following items were suggested as needed future action in the area of improving the abilities of states to do long-range planning.

1. Delineate the relationship between a state's master plan and a long-range plan for vocational education.

2. Determine appropriate groups and individuals who should be involved in long-range planning.

3. Provide for the planning function of vocational education in the organizational pattern of the state educational agency.

4. Provide sufficient flexibility in State Plan so as to be compatable with the state planning system; PPBS, etc.

5. Provide adequate staffing and delegate authority to the regional offices of USOE for assisting states in long-range planning.

6. Determine the part that vocational teacher education should play in long-range planning.

7. Develop closer alignment of the data required in the State Plan and the Comprehensive Area Manpower Planning System plan.

8. Provide follow-up training sessions to state division of vocational education personnel in long-range planning.

9. Provide for small group discussion sessions during future state directors meetings similar to this year; Division into small groups by state population size is recommended as occasional break-out procedure.

SEMINAR AGENDA

Program for the Second

NATIONAL LEADERSHIP DEVELOPMENT SEMINAR

for

STATE DIRECTORS OF VOCATIONAL EDUCATION

"MASTER PLANNING FOR STATE PROGRAMS OF VOCATIONAL-TECHNICAL EDUCATION"

September 16-19, 1969

The Christopher Inn

Columbus, Ohio

Sponsored by:

The National Association of State Directors
of Vocational Education
and
The Center
for Vocational-Technical Education
The Ohio State University

SEMINAR PURPOSE:

To provide a mechanism for the in-service leadership development of state directors of vocational education and their staffs.

SEMINAR OBJECTIVES:

1. To provide a forum for the exchange of information concerning exemplary and innovative programs of the states.
2. To provide an intensive examination of long-range master planning as it relates to programming in vocational-technical education.
3. To inform the seminar participants of the latest and most relevant research, development and training activities conducted by The Center for Vocational and Technical Education and other appropriate agencies.
4. To contribute to the professional development and self-improvement of state directors and their staffs.

STATE DIRECTORS PLANNING COMMITTEE

Joseph F. Murphy--Connecticut
Carl F. Lamar--Kentucky
John W. Bunten--Nevada
Francis T. Tuttle--Oklahoma
R. D. Anderson--NASDVE

CENTER STAFF

A. J. Miller, Project Director
Darrell L. Ward
John Beaumont

TUESDAY, SEPTEMBER 16, 1969

Morning Session--Chairman, *R. E. Taylor*, Director of The Center for Vocational Education

The Center

8:00 Registration* Lobby of The Christopher Inn

8:45 Board buses at The Christopher Inn for transportation to The Center for Vocational and Technical Education, 1900 Kenny Road

9:00 The Center Program for Research and Leadership Development in Vocational-Technical Education

R. E. Taylor and
The Center Staff

Break

10:00 Demonstration of Newly Developed Center Products for Vocational-Technical Education

"Improving the Adjustment of Vocational Students to Supervision"

Robert Campbell
Conference Room 2

"A System for State Evaluation of Vocational Education"

Harold Starr
North Auditorium

"Micro-Teaching and Video Recording in Vocational-Technical Education"

Calvin Cotrell
Room 1037

"Simulation Training Programs for State Leadership Development"

Richard Meckley
Room 1044

"Planning Ahead for the World of Work: Instructional Materials for Secondary School Girls"

Louise Vetter
Barbara Sethney
Conference Room 1

TUESDAY, SEPTEMBER 16, 1969

"Development of State Vocational-Technical Education Dissemination Systems"

Joel Magisos
Mary Ury
Room 1033

11:30 Summary of Center Activities

R. E. Taylor

Board buses for transportation to lunch and return to The Christopher Inn

12:00 Lunch

Afternoon Session--Chairman, *Joseph Murphy*, State Director of Connecticut

Suite F

1:30 Welcome

Joseph Murphy

Introduction to the Institute

Goals and Expected Outcomes

John Beaumont

Master Planning in Business

Curtis W. Fritze
Vice President of
Corporate Planning
Control Data Corporation

Discussion

Break

3:00 Master Planning in Government

DeMarquis Wyatt
Assistant Administrator
Program Plans and Analysis
National Aeronautics and
Space Administration

Discussion

4:30 Adjournment

TUESDAY, SEPTEMBER 16, 1969

4:30 Planning Meeting of Center Staff and Sub-Group Chairmen

6:00 Hospitality Hour

Sponsored by the
Brodhead-Garrett Company
Pool Lounge

WEDNESDAY, SEPTEMBER 17, 1969

Morning Session--Chairman, *John W. Bunten*, State Director of Nevada

Suite B

8:15 Reaction Panel to Presentations on Master Planning in Government and Industry

"Implications for State Vocational Education Long-Range Planning"

R. E. Taylor, Chairman
J. R. Cullison, State Director, Arizona
Robert S. Seckendorf, State Director, New York
Byrl R. Shoemaker, State Director, Ohio

The State Plan in Master Planning Problems Encountered in USOE Review of State Plans

USOE-DVTE
Staff

Panel: Problems in the Development of State Plans

John W. Bunten, Chairman
Ernest G. Kramer, State Director, Washington
Walter J. Markham, State Director, Massachusetts
M. G. Linson, State Director, Colorado
Cecil H. Johnson, State Director, South Carolina

Break

10:30 Next Steps in State Planning

Leon P. Minear
Director
Division of Voc.-Tech. Education
U. S. Office of Education

WEDNESDAY, SEPTEMBER 17, 1969

Sub-Group Orientation for Afternoon Work Session
John Beaumont

Sub-Group Work Session

(See handout in registration packet for state representatives assignments to sub-groups)

Group I: Suite A

Chairman, *John Koenig*, Assistant State Director, New Jersey
Recorder, *Richard W. Howes*, Connecticut

Group II: Suite A (North)

Chairman, *Robert P. VanTries*, State Director, Minnesota
Recorder, *Florence Wagner Sutler*, New York

Group III: Suite B

Chairman, *Francis T. Tuttle*, State Director, Oklahoma
Recorder, *M. G. Hunt*, Colorado

Group IV: Suite D

Chairman, *E. B. Oleson*, State Director, South Dakota
Recorder, *Dale Peters*, Missouri

Group V: Suite E

Chairman, *Neal D. Andrew*, State Director, New Hampshire
Recorder, *Les Thompson*, Nebraska

12:00 Lunch

Afternoon Session

1:30 Sub-Group Work Session Continued

(Refreshments will be available in Pool Lounge area at 3:00 p.m.)

4:30 Adjournment

WEDNESDAY, SEPTEMBER 17, 1969

Evening Session

7:00 Dinner: The Christopher Inn

Suite B
Toastmaster
J. Marion Adams
State Director
Arkansas

Long-Range Planning in Education

E. B. Nyquist
Commissioner of Education
State of New York

THURSDAY, SEPTEMBER 18, 1969

Morning Session--Chairman, *John Beaumont*, Consultant in Vocational Education

Suite B

8:30 Reports from Sub-Groups Work Sessions

Break

10:15 Reports Continued

11:30 Luncheon: The Christopher Inn

Suite A
Toastmaster
R. D. Anderson
Executive Secretary
National Association of State
Directors of Vocational Education

Speaker: *Lowell Burkett*, Executive Director, The American Vocational Association

Afternoon Session--Chairman, *Darrell Ward*, Specialist, State Leadership, The Center

2:00 Planning Within the Political Structure

Suite B

"Planning Within the Power Structure"

John Beaumont
Consultant, Vocational Education

THURSDAY, SEPTEMBER 18, 1969

"Political Aspects of Planning"

B. Dean Bowles
Professor
Educational Administration
University of Wisconsin

"Congressional and Legislative Liaison"

Arthur Lee
Chairman
Legislative Information Committee
American Voc.-Ed. Research Association

Discussion

4:30 Adjournment

FRIDAY, SEPTEMBER 19, 1969

Morning Session--Chairman, *R. E. Taylor*, Director, The Center
Suite B

8:30 Techniques and Tools in the Planning System Process

Strengths, limitations, uses and non-uses of processes

"Program Evaluation and Review Techniques and Critical Path Management"

Desmond Cook
Professor of Education
The Ohio State University

Discussion

"Planning, Programming and Budgeting Systems"

Joseph F. Malinski
Director of Program Planning
and Development, Division of
Vocational-Technical Education
Minnesota State Department of Education

Discussion

Break

FRIDAY, SEPTEMBER 19, 1969

10:15 "The Delphi Technique"

Donald P. Anderson
Assistant Dean of Education
The Ohio State University

Discussion

11:00 Next Steps for Implementation

Seminar Staff

12:00 Adjournment

END

DEPT. OF HEALTH
EDUCATION AND
WELFARE

U.S. OFFICE OF
EDUCATION
ERIC
DATE FILMED
4-14-70